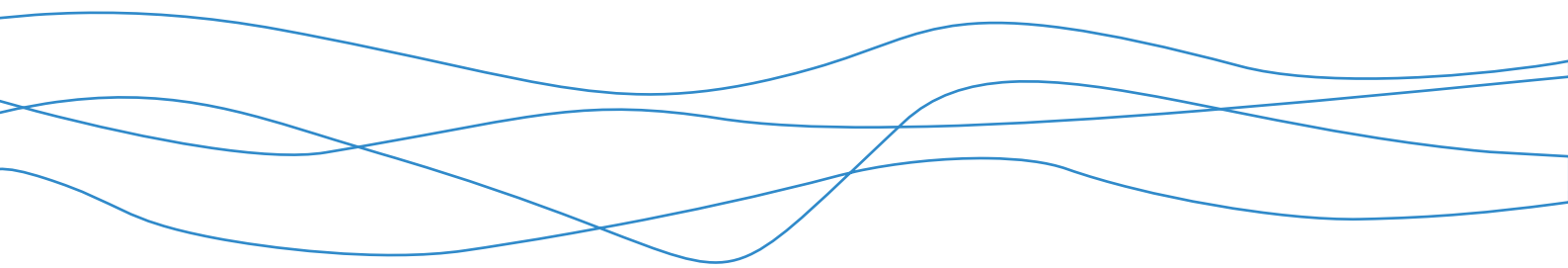




Bowdun Offshore Wind Farm, Offshore EIA Report

Volume 2, Chapter 13: Commercial Fisheries

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Glossary

Defined Term	Definition
Additional Mitigation	Also referred to as secondary mitigation which is defined by The Institute of Sustainability and Environmental Professionals (ISEP) (formerly Institute of Environmental Management and Assessment (IEMA)) as: Actions that will require further activity in order to achieve the anticipated outcome. These may be imposed as part of the planning consent, or through inclusion in the Environmental Impact Assessment (EIA) Report (sic).
Applicant (the)	Bowdun Offshore Wind Farm Limited (BOWFL).
Array Area	The Array Area is the area in which the Offshore Generation Assets will be located.
Automatic Identification System (AIS)	A system by which vessels automatically broadcast their identity and key statistics including location, destination, length, speed and current status. Most commercial vessels and European Union fishing vessels over 15 metres (m) in length are required to carry AIS.
Commercial Fishing	Any form of fishing activity legally undertaken where the catch is sold for taxable profit.
Contracts for Difference (CfD)	The UK Government's main mechanism for supporting low-carbon electricity generation.
COVID-19 Pandemic	The COVID-19 pandemic was a global outbreak of coronavirus, an infectious disease caused by the severe acute respiratory syndrome coronavirus, first identified in 2019.
Demersal Fish	Fish which live and feed on or near the seabed.
Demersal Seine	A seine net is a long net, with or without a bag in the centre, which is set either from the shore or from a boat for surrounding a certain area and is operated with 2 (long) ropes fixed to its ends (for hauling and herding the fish).
Demersal Trawl	A demersal trawl is a cone shaped net that is towed on the seabed to target demersal fish species.
Disruption Agreement	A formal agreement between the Applicant and a fisher that seeks to reduce disturbance or displacement to a fishery caused by the Proposed Development. Disruption Agreements may be supported by monetary payment for demonstrable loss of fishery access or economic disadvantage caused directly to active fishing vessels by disturbance or displacement by the Proposed Development.
Effect	Term used to express the consequence of an impact (i.e. the result of change or changes on specific environmental resources or receptors). The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity of the receptor or resource in accordance with defined significance criteria.

Defined Term	Definition
Embedded Mitigation	<p>Measures that are adopted as part of the Proposed Development and therefore assessed within the EIA. The proposed approach for the EIA for the Proposed Development is that Embedded Mitigation includes both primary mitigation and tertiary mitigation. These are defined by the ISEP as follows:</p> <p>Primary: Modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project, and do not require additional action to be taken.</p> <p>Tertiary: Actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.</p>
Environmental Impact Assessment (EIA)	<p>Process for the assessment of likely significant environmental effects of a project on the physical, biological and human environment during construction, Operation and Maintenance (O&M) and decommissioning.</p>
Environmental Impact Assessment Regulations (EIA Regulations)	<p>Terminology used in this Offshore EIA Report to refer to three sets of regulations:</p> <ul style="list-style-type: none"> • The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017; • The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017; and • The Marine Works (Environmental Impact Assessment) Regulations 2007.
EU-exit	<p>The withdrawal of the United Kingdom (UK) from the European Union (EU).</p>
Exclusive Economic Zone (EEZ)	<p>An area from the outer limit of the territorial sea up to 200 nm from the coastal baseline, over which a sovereign state has rights regarding marine resources.</p>
Export Cable Corridor	<p>The area seaward of MHWS which connects the Array Area with the Landfall within which the Offshore Export Cables will be installed.</p>
Functional Unit (FU) (Nephrops)	<p>For the purposes of management and stock assessment, Nephrops are split into a number of stocks or ICES 'functional units' (FUs) based on the discrete patches of mud which they inhabit.</p>
Gear Type	<p>The method/equipment used for fishing.</p>
Impact	<p>A change caused by an action that occurs during a project's lifetime.</p>
Inter-Array Cables (IAC)	<p>Cables which link the Wind Turbines to each other and with the OSPs.</p>
Interconnector Cables	<p>Cables which will connect individual OSPs to each other to provide redundancy against cable failure elsewhere.</p>
International Council for the Exploration of the Seas (ICES) Statistical Rectangles	<p>ICES standardise the division of sea areas to enable statistical analysis of data. Each ICES statistical rectangle is '30 min latitude by 1 degree longitude' in size (approximately 30 x 30 nm). A number of rectangles are amalgamated to create ICES statistical areas.</p>

Defined Term	Definition
Inter-Related Effects	The potential effects of multiple impacts from the construction, O&M and decommissioning of the Project, affecting one receptor.
Landfall	The area in which the Offshore Export Cables make landfall and is also the transitional area between the Offshore Transmission Assets and the Onshore Transmission Assets. Located in the Intertidal Area at Benholm.
Marine Directorate – Science, Evidence, Data and Digital (MD-SEDD)	The scientific division of the MD, which provides expert scientific, economic and technical advice and services on issues relating to marine fisheries, aquaculture, marine renewable energy, and the aquatic environment and its flora and fauna.
Marine Directorate (MD)	The Marine Directorate of the Scottish Government, formerly known as Marine Scotland. The planning and licensing authority for Scotland’s seas and custodian of Scotland’s National Marine Plan (NMP). The Marine Directorate - Licensing Operations Team (MD-LOT) are specifically responsible for managing Section 36 Consent and Marine Licence Applications seaward of MHWS.
Marine Protected Areas (MPAs)	MPAs are designated under the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act (MCAA) 2009. The MPA network protects nationally and internationally important marine wildlife, habitats, geology, and underwater landforms. Scotland’s MPAs are significantly important for European, North-East Atlantic, and global MPA networks.
Maximum Design Scenario (MDS)	The scenario within the design envelope likely to result in the greatest impact on a particular topic receptor, and therefore the one that should be assessed for that topic receptor.
Mitigation	Measures to avoid, prevent, reduce or control effects on the environment. See also definitions for Embedded Mitigation and Additional Mitigation.
Offshore Environmental Impact Assessment (EIA) Report (hereafter, ‘Offshore EIA Report’)	Document prepared to report the findings of the EIA for the Proposed Development and produced in accordance with the EIA Regulations. The Offshore EIA Report is submitted to support the Offshore Application for the Proposed Development, and to comply with EIA Regulations.
Offshore Export Cables	Subsea cables used to transmit electricity generated offshore by the Wind Turbines from the OSPs to shore. The Transition Joint Bay (TJB) is the location where the Offshore Export Cables terminate, and the onshore cabling begins.
Offshore Generation Assets	The infrastructure of the Proposed Development required to generate electricity comprising of the Wind Turbines, Wind Turbine foundations and associated infrastructure (e.g. IACs).
Offshore Infrastructure	All of the Offshore Infrastructure associated with the Proposed Development that is located seaward of MHWS, comprising the Offshore Generation Assets and the Offshore Transmission Assets.
Offshore Scoping Report	The report that presents the findings of the EIA scoping process undertaken for the Proposed Development with the purpose of obtaining a Scoping Opinion. The Offshore Scoping Report defines what is intended to be assessed and reported as part of the EIA.
Offshore Substation Platform(s) (OSP(s))	OSP(s) comprise the support structure, topside and electrical components used for collecting and/or converting electricity generated by the Wind Turbines for transmission by the Offshore Export Cables.

Defined Term	Definition
Offshore Transmission Assets	The infrastructure of the Proposed Development required to transmit the generated electricity comprising of the OSPs, Offshore Export Cables and associated infrastructure up to MHWS.
Operation and Maintenance (O&M)	The phase of the Proposed Development following completion of construction. This phase of development includes routine inspections, repairs and replacement of infrastructure and equipment (including Interconnector Cables and IACs), Scour Protection replenishment or replacement, major component replacement, painting and/or other coating works, removal of marine growth, and replacement of access ladders.
Otter Trawl	A net with large rectangular boards (otter boards) which are used to keep the mouth of the trawl net open. Otter boards are made of timber or steel and are positioned in such a way that the hydrodynamic forces, acting on them when the net is towed along the seabed, pushes them outwards and prevents the mouth of the net from closing.
Pelagic Fish	Fish which live within the water column, not on or near the seabed or at the coasts.
Pelagic Trawl	A net used to target fish species in the mid-water column.
Potting	Pots (which may be referred to as creels) are generally rigid structures into which fish or shellfish are guided or enticed through funnels that make entry easy but from which escape is difficult. There are many different styles and designs, each one has been designed to suit the behaviour of its target species.
Project (the)	An overarching term for the Bowdun Offshore Wind Farm (Bowdun OWF) comprising the offshore and onshore infrastructure required to generate and transmit electricity from the Array Area to the onshore GCP. The Project includes the Offshore Generation Assets, the Offshore Transmission Assets and the Onshore Transmission Assets.
Project Design Envelope (PDE)	A description of the range of possible elements that make up the design options for the Proposed Development under consideration when the exact engineering parameters are not yet known.
Proposed Development	Term used to define the Offshore Infrastructure associated with the Project seaward of MHWS for which consent is being sought. Further details of the parameters are included in Volume 1, Chapter 3: Project Description.
Safety Zones	An area extending a maximum of 500 m from the central point of a subsea installation in which other vessels are prohibited from entering, except in circumstances outlined within Section 96 of the Energy Act, 2004.
Scallop Dredge	A method to catch scallop using steel dredges with a leading bar fitted with a set of spring-loaded, downward pointing teeth. Behind this toothed bar (sword), a mat of steel rings is fitted. A heavy net cover (back) is laced to the frame, sides and to the after end of the mat to form a bag.

Defined Term	Definition
Scoping Opinion	A document produced by MD-LOT which is issued in response to submission and review of the Offshore Scoping Report. The Scoping Opinion is supported with feedback and advice from consultees, which details what is expected to be included in the Offshore EIA Report and what can be scoped out of the EIA process.
Scoping Workshop	A series of sessions preceding the finalisation of the Offshore Scoping Report to provide an opportunity for the Applicant to consult on the draft scope and for stakeholders to request additional information on key issues.
Scottish Seine	An encircling net shot in the open sea using very long ropes to lay out the net, and ropes on the seabed prior to towing the net closed and hauling from a boat under its own power.
Scour Protection	Protective materials installed to avoid sediment being eroded away from the base of the foundations and/or buried subsea cable due to the flow of water.
Section 36 Consent	Scottish Ministers' consent under Section 36 of the Electricity Act 1989 required to permit the generation and operation of an energy generation station.
Sectoral Marine Plan (SMP)	A plan developed by the Scottish Government which provide the strategically planned spatial footprint for offshore wind development in Scotland.
Significance	Effect factor that is determined by the magnitude of impact along with the sensitivity of the receptor.
Site Boundary	The boundary within which all elements of the Proposed Development will be located. The Site Boundary comprises the Array Area and Export Cable Corridor which ends at MHWS.
Study Area	For each environmental topic, the baseline environment will be characterised, and the potential environmental impacts will be described within a topic-specific study area. Specific study areas are defined for each topic and are based on the maximum spatial extent across which potential impacts of the Project may be experienced by the relevant receptors (i.e. Zone of Influence).
Swept Area Ratio	Swept Area Ratio (derived from Vessel Monitoring System data) indicates the number of times per annum that a fishing gear makes contact with (or sweeps) the seabed surface. Surface Swept Area Ratio provides a proxy for fishing intensity.
Thistle Wind Partners (TWP)	Company established for the development of the Project.
Vessel Monitoring System (VMS)	A system used in commercial fishing to allow environmental and fisheries regulatory organisations to monitor, minimally, the position, time at a position, and course and speed of fishing vessels.
Vivier	Vivier crabbers are generally larger vessels with the ability to retain large numbers of live crab onboard in storage tanks.
Wind Turbines	Structures comprising of a tubular tower, rotor blades, and a nacelle which houses the Wind Turbine generator.

Acronyms

Acronym	Definition
AIS	Automatic Identification System
CaP	Cable Plan
CBA	Cable Burial Assessment
CBRA	Cable Burial Risk Assessment
Cefas	Centre for Environment, Fisheries, and Aquaculture Science
CFLO	Company Fisheries Liaison Officer
COLREGS	The Convention on the International Regulations for Preventing Collisions at Sea
DCF	Data Collection Framework
DSLP	Development Specification and Layout Plan
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMF	Electromagnetic Field
EMODNet	European Marine Observation and Data Network
EMSA	European Maritime Safety Agency
ESCA	European Subsea Cables Association
EU	European Union
FLO	Fisheries Liaison Officer
FLOWW	Fisheries Liaison with Offshore Wind and Wet Renewables group
FMMCP	Fisheries Mitigation Monitoring and Communication Plan
FMMS	Fisheries Management and Mitigation Strategy
HVDC	High Voltage Direct Current
IAC	Inter-Array Cable
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
ICES	International Council for the Exploration of the Seas
iFISH	Integrated Fisheries System Holding
IMO	International Maritime Organization
LMP	Lighting and Marking Plan
MCA	Maritime & Coastguard Agency
MCO	Marine Conservation Order
MD-LOT	Marine Directorate-Licensing Operations Team
MDS	Maximum Design Scenario
MD-SEDD	Marine Directorate – Science, Evidence, Data and Digital
MGN	Marine Guidance Notice
MMO	Marine Management Organisation
MPA	Marine Protected Area

Acronym	Definition
MPS	Marine Policy Statement
N&EC RIFG	North and East Coast Regional Inshore Fishery Group
NLB	Northern Lighthouse Board
NMP	National Marine Plan
NMPi	National Marine Plan interactive
NSVMP	Navigational Safety and Vessel Management Plan
NtM	Notice to Mariners
O&M	Operation and Maintenance
OMP	Operation and Maintenance Programme
OSP	Offshore Substation Platform
OWF	Offshore Wind Farm
PDE	Project Design Envelope
POA	Plan Option Area
RAM	Restricted in their Ability to Manoeuvre
RBS	Register of Buyers and Sellers
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SFF	Scottish Fishermen's Federation
SMP	Sectoral Marine Plan
SPFA	Scottish Pelagic Fisherman's Association
SWFPA	Scottish White Fish Producers Association
TAC	Total Allowable Catch
TCA	Trade and Cooperation Agreement
UK	United Kingdom
VMP	Vessel Management Plan
VMS	Vessel Monitoring System

Table of Units

Units	Definition
%	Percent
£	GB Pound
GW	GigaWatt
km	Kilometre
km²	Square kilometre
m	Metre
m²	Square Metre
nm	Nautical mile
t	Tonne

Units	Definition
kg	Kilogram
MW	MegaWatt
cm	Centimetre

13 Commercial Fisheries

13.1 Introduction

13.1.1 This chapter of the Offshore Environmental Impact Assessment (EIA) Report, prepared by NiMa Consultants Limited, presents the assessment of the likely significant environmental effects on commercial fisheries, that may potentially occur as a result of the Proposed Development during the construction, Operation and Maintenance (O&M) and decommissioning phases.

13.1.2 The assessment presented is supported by the following Technical Appendices:

- Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report; and
- Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan (FMMCP).

13.1.3 The assessment presented is also informed by the following technical chapters:

- Volume 2, Chapter 9: Fish and Shellfish Ecology; and
- Volume 2, Chapter 14: Shipping and Navigation.

13.1.4 In this section, ‘Commercial Fishing’ is defined as any form of fishing activity legally undertaken where the catch is sold for taxable profit.

13.2 Commercial Fisheries Study Areas

13.2.1 The Commercial Fisheries Study Areas are shown in Figure 13.1.

13.2.2 The Proposed Development is located within the International Council for the Exploration of the Seas (ICES) Division 4b (Central North Sea) statistical area; within United Kingdom (UK) Exclusive Economic Zone (EEZ) waters. For the purpose of statistical analysis, ICES Division 4b is divided into statistical rectangles which are consistent across all Member States operating in the North Sea. Each ICES statistical rectangle is ‘30 min latitude and 1 degree longitude’ in size, which equates to approximately 30 nm².

13.2.3 The Proposed Development overlaps with ICES rectangles 42E7, 42E8 and 43E8. Two Commercial Fisheries Study Areas are defined, as described below.

Local Commercial Fisheries Study Area

13.2.4 For the purposes of the EIA, the Local Commercial Fisheries Study Area comprises ICES rectangles 42E7, 42E8 and 43E8 as illustrated on Figure 13.1. The Local Commercial Fisheries Study Area is intended to focus on the overlap of the Proposed Development with these ICES rectangles. Noting that the Array Area overlaps ICES rectangles 42E8 and 43E8, and the Export Cable Corridor overlaps with ICES rectangles 42E7 and 42E8.

Regional Commercial Fisheries Study Area

13.2.5 A wider Regional Commercial Fisheries Study Area is considered to provide context to the description of Commercial Fishing activity in the Local Commercial Fisheries Study Area. The Regional Commercial Fisheries Study Area includes those ICES rectangles that overlap the Proposed Development,

together with those immediately adjacent to the Local Commercial Fisheries Study Area (rectangles 41E7 to 41E9, 42E7 to 42E9, 43E7 to 43E9 and 44E8 to 44E9), as indicated in Figure 13.1. Analysis of data at the scale of the Regional Commercial Fisheries Study Area takes into consideration that most commercial fish and shellfish receptor populations are distributed at a wider spatial scale, ensuring that potential implications of displacement of fishing activity can be adequately understood.

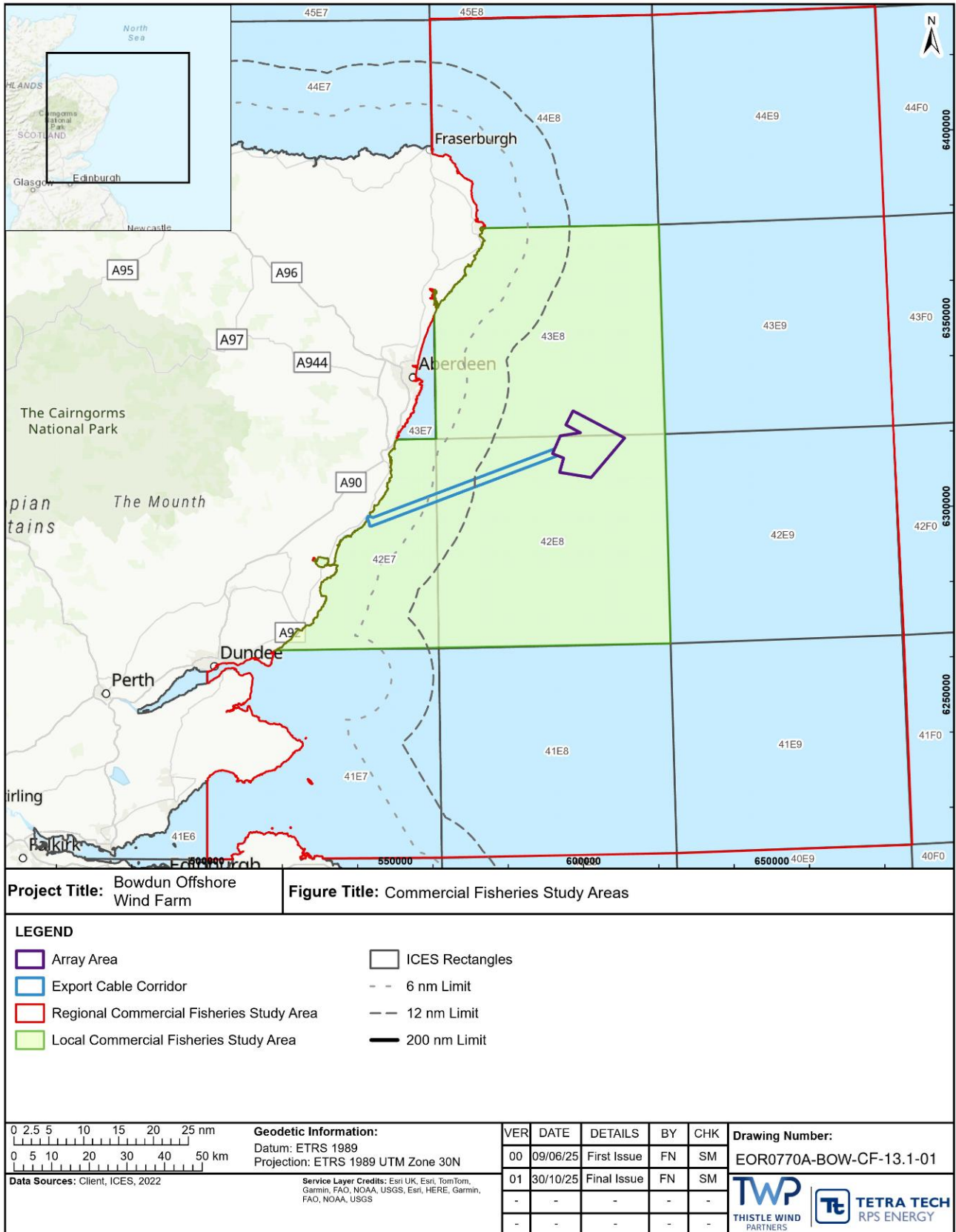


Figure 13.1: Commercial Fisheries Study Areas

13.3 Legislative and Policy Context

- 13.3.1 The overarching policy and legislation applicable to the Proposed Development is presented in Volume 1, Chapter 2: Policy and Legislation. There are no legislative controls that provide provisions to commercial fisheries. Policy specific to commercial fisheries is contained in the Sectoral Marine Plan (SMP) for Offshore Wind Energy (Scottish Government, 2020 and 2025d), Scotland’s National Marine Plan (NMP) (Scottish Government, 2015) and the UK Marine Policy Statement (MPS), (His Majesty’s (HM) Government, 2011).
- 13.3.2 Relevant policy provisions of the SMP, NMP and MPS are set out in Table 13.1, Table 13.2 and Table 13.3, respectively.
- 13.3.3 At the time of preparation of this chapter, a draft version of the updated SMP is subject to public consultation¹. The content of the draft updated SMP has been considered in Table 13.1.

Table 13.1: Summary of SMP for Offshore Wind Energy Relevant to Commercial Fisheries

Summary of Relevant Policy	How and Where Considered in this Offshore EIA Report
<p>The SMP and draft updated SMP identify plan option areas for Offshore Wind Farm (OWF) development and identifies key consenting issues associated with development.</p> <p>Potential impacts on Commercial Fishing are identified as a key risk factor to development in the East Region Plan Option Areas (POAs) in both the SMP and draft updated SMP.</p> <p>The draft updated SMP states that a key socio-economic risk identified for the East Region is a ‘Reduction in fishing activity by vessels over 12 m utilising demersal trawls, midwater trawls, demersal seines and mechanical dredges’.</p>	<p>Reflecting the key risk factors identified in the East Region POAs, this chapter presents an assessment of potential impacts on commercial fisheries in Section 13.10</p>

Table 13.2: Summary of Scotland’s NMP Relevant to Commercial Fisheries

Summary of Relevant Policy	How and Where Considered in this Offshore EIA Report
<p>Contains sector-specific policies relevant to offshore wind and commercial fisheries. Policies under Chapter 4 General Policies are of relevance to commercial fisheries, specifically GEN 4 which encourages proposals to enable co-existence and developments that do not result in areas being unsuitable for future use by others.</p>	<p>Reflecting the desire for co-existence, this chapter presents an assessment of potential impacts on commercial fisheries in Section 13.10 and identifies measures to encourage co-existence in Section 13.9.</p>

¹ [Offshore wind energy - draft updated Sectoral Marine Plan 2025: consultation - gov.scot](https://www.gov.scot/publications/offshore-wind-energy-draft-updated-sectoral-marine-plan-2025-consultation/pages/20)

Summary of Relevant Policy	How and Where Considered in this Offshore EIA Report
<p>Policies under Chapter 6 Sea Fisheries ('FISHERIES 1 – 5') are considered relevant to commercial fisheries. Policies seek to safeguard existing fishing opportunities and activities wherever possible and advise that mechanisms for managing conflicts between the fishing sector and other users of the marine environment should be in place. (FISHERIES 1) Preparation of a Fisheries Management and Mitigation Strategy (FMMS) is recommended where existing fishing opportunities and activity cannot be safeguarded (FISHERIES 3). Chapter 6 Sea Fisheries provides principles for interactions with other users (paragraph 6.22), including short term displacement of fishing during installation, potential damage to fishing equipment and following best practice guidance (paragraph 6.26).</p>	<p>Reflecting the key concerns and issues that should be addressed in an impact assessment and any FMMS (now referred to as FMMCP under current Marine Directorate guidance (Scottish Government, 2025a)), the Offshore EIA Report:</p> <ul style="list-style-type: none"> • Assesses the potential impacts of the Proposed Development on commercial fisheries in Section 13.10; and • Sets out measures to mitigate any constraints that the Proposed Development may place on Commercial Fishing activity in Section 13.9.
<p>Chapter 11 Offshore Wind and Marine Renewable Energy provides principles for interactions with other users (paragraphs 11.26-11.29), including physical competition for space due to the impact of the physical presence of structures and encourages an inclusive approach to minimise and avoid impacts; and participation in working groups to develop co-existence and mitigation.</p>	
<p>Policies under Chapter 14 Submarine Cables (CABLES 2) are considered relevant to commercial fisheries. Policies seek to minimise impacts on the environment and other users, reduce conflict with other users, ensure suitable protection where burial is not feasible and use of post-lay surveys, monitoring and remedial action where required. In addition, Chapter 14 Submarine Cables provides principles for interactions with other users (paragraphs 14.8-14.11), including burial and protection to reduce conflict with other users and prevent damage to cables, engagement with stakeholders and provision of information under the Kingfisher Information Service – Offshore Renewable & Cable Awareness (KIS-ORCA) project.</p>	

Table 13.3: Summary of UK MPS Relevant to Commercial Fisheries

Summary of relevant policy	How and where considered in this Offshore EIA Report
<p>Explicitly expresses support for the fishing sector, and with regard to displacement, advocates “seeking solutions such as co-location of activity wherever possible”. Specifically, paragraphs 3.8.1, 3.8.2, and 2.3.1.5 stipulate that the process of marine planning should “enable the co-existence of compatible activities wherever possible” and supports the reduction of real and potential conflict as well as maximising compatibility and encouraging co-existence of activities.</p>	<p>Reflecting the desire for co-existence, this chapter presents an assessment of potential impacts on commercial fisheries in Section 13.10 and identifies measures to encourage co-existence in Section 13.9.</p>

Guidance

13.3.4 The following guidance is directly applicable to commercial fisheries and has been considered within this Chapter:

- Good Practice Guidance for assessing fisheries displacement by other licensed marine activities (Scottish Government, 2022a);
- Best Practice Guidance for Fishing Industry Financial and Economic Impact Assessments (United Kingdom Fisheries Economic Network and Seafish, 2012);
- FLOWW Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Disruption Settlements and Community Funds (FLOWW, 2015);
- FLOWW Best Practice Guidance for Fisheries Liaison with Offshore Renewables Developments (FLOWW, 2025);
- Options and opportunities for marine fisheries mitigation associated with wind farms (Blyth-Skyrme, 2010a);
- Developing guidance on fisheries Cumulative Impact Assessment for wind farm developers (Blyth-Skyrme, 2010b);
- Guidelines for data acquisition to support marine environmental assessments of offshore renewable energy projects. Contract report: ME5403 (Centre for Environment Fisheries and Aquaculture Science (Cefas), 2012);
- Guidelines for liaison with the fishing industry on the United Kingdom Continental Shelf UKCS – Issue 8 (Offshore Energies UK, 2023);
- Fishing and Submarine Cables - Working Together (International Cable Protection Committee; Drew, 2009);
- European Subsea Cables Association (ESCA) Guideline 01 and Appendices (ESCA, 2018);
- Guidance on preparing Mitigation and Monitoring Plans (Scottish Government, 2025a);

- Offshore windfarms - monitoring impacts on the Commercial Fishing industry: good practice guidance (Scottish Government, 2025b);
- Recommendations for positive interactions between Offshore Wind Farms (OWFs) and fisheries. European Innovation Council and SMEs Executive Agency (European Commission) (Dupont *et al.*, 2020).

13.3.5 It is noted that established fisheries liaison best practice has historically been developed through the Fisheries Liaison with Offshore Wind and Wet Renewables group (FLOWW). The Scottish Fishermen’s Federation (SFF) and its affiliated Associations have withdrawn from the FLOWW process and do not currently endorse that guidance. No alternative SFF-endorsed fisheries liaison guidance is presently available.

13.3.6 The Applicant acknowledges the position of SFF and its affiliated Associations regarding the FLOWW process. The approach adopted within this chapter therefore focuses on the application of recognised fisheries liaison and mitigation procedures and protocols consistent with established good practice, irrespective of whether these are formally attributed to the FLOWW guidance.

13.3.7 In the absence of any current alternative to FLOWW, the Applicant has had regard to established fisheries liaison good practice as reflected within current Marine Directorate guidance and industry practice to date. This is considered particularly relevant given the Proposed Development is a fixed foundation OWF for which established procedures are considered applicable.

13.4 Consultation

13.4.1 The approach to consultation for the Proposed Development is set out in Volume 1, Chapter 5: Consultation and Engagement. A summary of the issues raised during consultation activities undertaken to date specific to commercial fisheries is presented in Table 13.4, together with how these issues have been considered in the production of this assessment. Further detail is presented within Volume 1, Chapter 5: Consultation and Engagement, Volume 3, Technical Appendix 5.1: Consultation Log and Volume 3, Technical Appendix 5.2: Pre-Application Consultation Report. It is noted that the Applicant is a member of the East Region Commercial Fisheries Working Group (CFWG).

Table 13.4: Summary of Key Consultation Issues Raised During Consultation Activities Undertaken for the Proposed Development Relevant to Commercial Fisheries

Date	Consultee and Type of Consultation	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
25/04/2024	<p>SFF, Scottish Pelagic Fishermen’s Association (SPFA), Maritime and Coastguard Authority, MD-LOT, RPS, NiMa Consultants Ltd</p> <p>Bowdun Scoping Workshop, Teams meeting</p>	<p>Discussion of commercial fisheries baseline data sources, noting:</p> <ul style="list-style-type: none"> • Desire to see consideration of baseline data in EIA that also covers the period prior to EU-exit; • Relevance of sharing baseline data between commercial fisheries and shipping and navigation EIA consultants to build a robust understanding of baseline activity; • SFF agreement to share in confidence member vessel plotter data to support baseline characterisation and impact assessment. <p>Discussion of Cumulative Effects Assessment (CEA) study area with action taken to confirm this to stakeholders.</p> <p>Other actions noted, though not relevant to EIA.</p>	<p>Workshop feedback was considered in preparation of the Offshore Scoping Report.</p> <p>The Commercial Fisheries Cumulative Effects Study Area is presented in Section 13.12.</p>
25/11/2024	<p>MD-LOT</p> <p>(2024 Bowdun Offshore Wind Farm (OWF) Scoping Opinion)</p>	<p>The Scottish Ministers are generally content with the study area identified in Section 13.2 of the Offshore Scoping Report.</p> <p>The Scottish Ministers are broadly content with the data sources used to characterise the baseline. The Scottish Ministers request that the Developer follow the MD-SEDD advice received on 09/10/2024, regarding the EMODNet Automatic Identification System (AIS) data, the use of Marine Management Organisation Vessel Monitoring System (VMS) datasets and the use of ScotMap data to further inform the baseline characterisation. The Scottish Ministers also refer the Developer to the SFF representation which recommends the use of plotter data provided by fishers, associations and the SFF as this data not captured by utilising only AIS or VMS. The Scottish Ministers agree with the SFF representation reiterating the value of utilising data</p>	<p>Noted; the Commercial Fisheries Study Areas are confirmed in Section 13.2 of this chapter.</p> <p>The advice regarding baseline data sources has been noted and applied in the EIA. This is evidenced by confirmation of the datasets used to characterise the baseline provided in Section 13.5 of this chapter.</p> <p>Fishing vessel plotter data has been sourced from SFF and has informed the characterisation of the baseline and impact assessment.</p>

Date	Consultee and Type of Consultation	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
		generated prior to the UK's departure from the European Union (EU).	
		The Scottish Ministers are content with the potential commercial fisheries impacts identified and scoped into the EIA Report in Table 13.2. This is supported by the MD-SEDD advice received on 09/10/2024.	Noted. Scoped in impacts are assessed in Section 13.10.
		The Scottish Ministers note that sections 3.5 and 3.6 of the Offshore Scoping Report detail the potential need for external protection methods for subsea cabling. The Scottish Ministers agree with the MD-SEDD advice received on 09/10/2024 which advises that methods such as rock placement be utilised where possible with concrete mattresses the last choice for cable protection. Furthermore, MD-SEDD recommends that any rock placement carried out follows the industry best practice guidance.	The advice is noted. The commercial fisheries assessment is based on a Maximum Design Scenario (MDS), as confirmed in Section 13.7 of this chapter. The Applicant will continue to engage with the fishing industry as the final design of the Proposed Development is determined. SFF will be consulted on post-consent plans that confirm final design details, including means of cable protection, prior to their approval by Scottish Ministers.
		The Scottish Ministers agree with the MD-SEDD advice received on 09/10/2024 that the CEA described in Section 13.9.2 of the Offshore Scoping Report should take into account any nearby MPAs and other fisheries management areas with restricted fishing activity.	The CEA presented in Section 13.12 has screened in and therefore takes into account protected areas and fisheries management measures.
09/10/2024	(Marine Directorate – Science Evidence Data and Digital (MD-SEDD) 2024 Bowdun OWF Scoping Opinion – Scoping Response	MD-SEDD are content that all potential fisheries impacts have been identified and scoped in.	The advice is noted.
		MD-SEDD advise that applicants should include AIS data provided by EMODNet which gives the amount of time spent by fishing vessels in a location. These can be found via emodnet.ec.europa.eu under “vessel density”. These provide a better indication of fishing intensity than the AIS route density data presented in the scoping report, as they weight	AIS data provided by EMODNet has been utilised. This is evidenced by confirmation of the datasets used to characterise the baseline provided in Table 13.5. Data in the format proposed for use by MD-SEDD was explored but was found to under-represent

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		<p>the movement of a vessel through a grid square with how long the vessel has stayed in that square and how much of the square it has covered. The route density data presented in the scoping report is also useful for visualising transiting routes for assessing impacts to steaming routes.</p>	<p>fishing activity in the study areas (relative to other spatial data sources). Route density data has been presented, with the limitations of that data explained in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report.</p>
		<p>MD-SEDD note that the ScotMap data from 2014 have been mentioned as a data source and advise that these data should not be relied upon to provide information on the commercial fisheries baseline for the inshore fleet as they are out of date. MD-SEDD advise that this dataset should be used only to validate information gathered through consultation with local fishers and stakeholders. The heat maps for <12m vessels (2017 to 2021) available on National Marine Plan interactive (NMPi) are a more up to date source of spatial activity, and MD-SEDD note these have also been utilised.</p>	<p>The advice regarding baseline data sources has been noted and applied in the EIA. This is evidenced by confirmation of the datasets used to characterise the baseline provided in Table 13.5, with NMPi data mapped in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report.</p>
		<p>When using VMS datasets from the MMO to produce spatial maps of fishing activity, MD-SEDD recommend that the data are used to present figures showing both average VMS value and also fishing effort (kW per hour). Areas of high value may not necessarily equate to areas of high effort so it is advised to visualise the fishing activity using both indices. This will provide further information about the commercial fisheries baseline and help in the assessment of possible displacement of fishing effort.</p>	<p>The advice regarding baseline data sources has been noted and applied in the EIA. This is evidenced by confirmation of the datasets used to characterise the baseline provided in Table 13.5, with data mapped in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report.</p>
		<p>MD-SEDD advise that the CEA should take into account any nearby Marine Protected Areas and other fisheries management areas with restricted fishing activity as potential projects that could cause cumulative effects for commercial fisheries.</p>	<p>The advice has been noted and applied in the EIA. Section 13.12 of this chapter confirms that the assessment of cumulative effects takes into account MPAs and associated proposed fisheries management measures.</p>

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		MD-SEDD advise undertaking a fisheries displacement assessment within the EIA and referring to the 'Good practice guidance for assessing fisheries displacement by other licensed marine activities' (Xodus, 2022) for further information on how to do this.	Displacement effects are assessed in Section 13.10 and Section 13.3 confirms that the guidance cited by MD-SEDD has been utilised.
14/10/2024	Peterhead Fishery Office 2024 Bowdun OWF Scoping Opinion – Scoping Response	Nil response. Requested to know the associations in the Peterhead area made aware of the Scoping Report.	In terms of engagement on the EIA process, the Applicant has engaged with SFF, SPFA, Scottish White Fish Producers Association (SWFPA) and North and East Coast Regional Inshore Fisheries Group (N&EC RIFG). The SFF have provided a response to the Offshore Scoping Report on behalf of these and its other constituent associations. The Applicant has appointed a company Fisheries Liaison Officer, who has been in contact about the Proposed Development with local fishers. A Pre-Application Consultation event for the Proposed Development was held in Johnshaven in October 2025, which was attended by a number of local fishers.
25/10/2024	SFF 2024 Bowdun OWF Scoping Opinion – Scoping Response	SFF notes from sub-section 3.5 'Wind Turbine Foundations and Supporting Structures' (p32) of the Offshore Scoping Report that the Project Design Envelope (PDE) presently incorporates options for both fixed (monopile; piled or drilled jacket; and suction bucket jacket) or floating Wind Turbine foundations, with final design and foundation options to be refined throughout the EIA process. Of primary concern is the spatial footprint of floating Wind Turbines and the potential snagging hazard that their moorings system creates to fishing vessels, SFF would propose to the Applicant to use the fixed foundation design (with lesser spatial footprint) for as much WTGs as possible.	The advice is noted. The commercial fisheries assessment is based on an MDS, as confirmed in Section 13.7 of this chapter. Floating foundations are no longer included in design.

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		<p>Considering the water depth across the Proposed Development Array Area is between -55 m to -75 m, we are of the view that the use of fixed foundation is feasible as a fixed foundation wind farm in a water depth of greater than -70 m is planned for another offshore wind development in Scottish waters.</p> <p>Where the use of fixed foundation WTGs is not feasible due to technical issues, in such situations, SFF's first preferred Wind Turbine floating foundation option is Tension-Leg Platform (TLP), since they have a lesser spatial footprint on the seabed.</p> <p>SFF notes from para 3.5.35 (p44) that the Proposed Development design envelope currently considers the use of both static and dynamic (Lazy 'S' configuration) Inter-Array Cables (IACs). Considering the footprint of the dynamic IACs sections, SFF's preferred configuration is free hanging vs 'lazy S' shape.</p> <p>SFF notes from sections 3.5. and 3.6 that static sections of IAC cable may be surface laid or buried. In addition, as with the IACs, where possible the Offshore Export Cables and Interconnector Cables will be buried to an appropriate target burial depth (1 m to 3m). In cases where such burial is not feasible (e.g. the foundation entry points, or where the cable is expected to cross areas of bedrock, pipelines, or other existing cables), alternative protection methods (e.g. concrete mattresses, rock placement, cast iron shells or grout/rock bags) will be considered.</p> <p>The primary concern of the SFF is fishermen's safety, the SFF would appreciate it if the Applicant could make all efforts to reach the required depth of cable burial. The avoidance of using cable protection measures as much as reasonably practical would also be appreciated as the</p>	<p></p> <p>The advice is noted.</p> <p>The commercial fisheries assessment is based on an MDS, as confirmed in Section 13.7 of this chapter. Floating foundations and therefore dynamic cables are no longer included in design.</p> <p>The advice is noted.</p> <p>The commercial fisheries assessment is based on an MDS, as confirmed in Section 13.7 of this chapter. The MDS confirms the intention to bury cables and identified maximum design scenarios for any required cable protection.</p> <p>The Applicant will continue to engage with the fishing industry as the final design of the Proposed Development is determined. SFF will be consulted on post-consent plans that confirm final design details prior to their approval by Scottish Ministers.</p>

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		<p>volume of cable protection mass will disrupt the marine habitat and would create a snagging hazard for fishing vessels within Array Area.</p> <p>In terms of using cable protections, SFF is opposed to using concrete mattresses, grout/rock bags and sandbags in open water since they create severe snagging hazards for bottom trawl fishing vessels and static gears. SFF's preferred cable protection measure is rock placement/protection considering industry standard rock size (1" to 5") with a 1:3 profile followed by an over-trawl sweep alongside a long term monitoring programme.</p> <p>In terms of crossing points, as they create obstacles and a snagging hazard to the fishing industry, SFF would suggest that the cable crossing should be avoided as much as possible. Where avoidance of crossings is practical, the design of cables and pipelines crossing points should be consulted with fishing industry to ensure their impacts are mitigated.</p> <p>Our preferred method of cable burial (for export and interconnector cables) is simultaneously trench and burial as pre-lay cables on the seabed pose a snagging hazard to fishing vessels.</p>	<p>The potential for increased snagging risk is assessed in Section 13.10.</p>
		<p>SFF notes from para 3.5.42 (p47) that an alternative solution for connecting dynamic IACs using subsea collectors is also being considered. The maximum footprint area of the subsea collector is 25 m X 25 m. Depending on the seabed conditions, the subsea collector may be installed on the seabed through gravity or by using pin piles or anchoring systems. The height of a SC is estimated at 6 m from the seabed. For the Proposed Development there would be between 16 to 20 subsea collectors. Considering additional spatial footprint and its potential to pose snagging hazard to fishing gears, SFF objects to use of subsea collectors and</p>	<p>The advice is noted.</p> <p>The commercial fisheries assessment is based on a MDS, as confirmed in Section 13.7 of this chapter. Subsea collectors are no longer included in design.</p> <p>The Applicant will continue to engage with the fishing industry as the final design of the Proposed Development is determined. SFF will be consulted on post-consent plans</p>

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		<p>instead propose the conventional method of IAC connection to be adopted for the Proposed Development (if the project opts for fixed foundation or tension-leg platform).</p>	<p>that confirm final design details prior to their approval by Scottish Ministers.</p>
		<p>SFF notes from para 3.6.1 (p47) that the Proposed Development may require up to 3 OSPs which will be located within the Array Area of the Scoping Boundary. Considering the spatial footprint of the OSPs (8,200 m² each), we propose that the design and siting of the OSPs must be consulted with the fishing industry to ensure that they do not overlay prime fishing grounds.</p>	<p>The Applicant will continue to engage with the fishing industry as the final design of the Proposed Development is determined. SFF will be consulted on post-consent plans that confirm final design details prior to their approval by Scottish Ministers.</p>
		<p>SFF notes from section 3.7 (p51) that the Proposed Development pre-construction activities include boulder and Unexploded Ordnance (UXO) clearance.</p>	<p>The commercial fisheries assessment is based on a MDS, as confirmed in Section 13.7 of this chapter. The MDS is inclusive of pre-construction activities, including UXO clearance.</p>
		<p>Since the relocation of boulders from their natural positions and re-positioning them creates a snagging hazard for fishing vessels, SFF would suggest avoiding the relocation of boulders as much as possible. However, where boulders relocation is unavoidable, we recommend the new locations/coordinates of the relocated boulders should be recorded and shared with fishermen. Fishermen require geographical readings to decimal of a minute format (3 decimal places sufficient) rather than going down to actual seconds and the datum should be WGS84 rather than ED50.</p>	<p>Table 13.12 confirms Applicant commitment to adhere to this request.</p>
		<p>Where potential UXO are identified, SFF would propose that they may either be avoided (e.g. through re-routing or micro-siting) or cleared on land as UXO detonation at sea will have an adverse impact on fish and shellfish and other marine fauna in the area.</p>	<p>The advice is noted. The commercial fisheries and fish and shellfish assessments are based on a MDS, as confirmed in Volume 2, Chapter 9: Fish and Shellfish Ecology and Volume 2, Chapter 13: Commercial Fisheries.</p>

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			<p>The Applicant will continue to engage with the fishing industry as the final design of the Proposed Development is determined. SFF will be consulted on post-consent plans that confirm final design details, including means of UXO clearance, prior to their approval by Scottish Ministers.</p>
		<p>SFF notes from section 3.8 (p51) that Scour Protection methods may be utilised to mitigate the likelihood of scour developing, which is likely to include graded rock, although other options including mattresses, and rock bags are included in the PDE. As indicated earlier, SFF objects to the use of concrete mattresses and rock bags in open waters and we propose industry standard graded rocks to be utilised for Scour Protection.</p>	<p>The advice is noted.</p> <p>The commercial fisheries assessment is based on a MDS, as confirmed in Section 13.7 of this chapter.</p> <p>The Applicant will continue to engage with the fishing industry as the final design of the Proposed Development is determined. SFF will be consulted on post-consent plans that confirm final design details, including means of cable protection, prior to their approval by Scottish Ministers.</p>
		<p>The SFF notes from section 3.9 (p52) that there is potential that wet storage may be needed to facilitate construction of the Proposed Development, by the Applicant or ports and/or technology providers. Considering the spatial footprint of wet storage and the potential disruption that they may cause to fishing operations and fishing vessels transiting the area, we propose that the siting of wet storage must be consulted with the fishing industry to ensure its impact on fishers is avoided at the outset.</p>	<p>The Applicant confirms that there is no wet storage requirement anticipated for the Proposed Development, which is a fixed foundation offshore wind farm.</p>
		<p>SFF notes from section 3.12 (p55), of the SR that the developer is required under Section 105 of the Energy Act 2004 to prepare a Decommissioning Programme for approval by Scottish Ministers. Specific details on the decommissioning activities are not known at this stage of</p>	<p>Table 13.12 confirms Applicant commitment to prepare a Decommissioning Programme.</p>

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		<p>consent, but further details will be provided in the Proposed Development EIA Report.</p>	
		<p>To reiterate our safety concern of fishing vessels, SFF would like to see all development related infrastructures are recovered/removed to shore followed by over-trawl sweeps (seabed sweeps using fishing gears). In addition, the seabed should be restored to its pre-development condition post-decommissioning, and the developer/operator should ensure it is safe for fishing operations to fully resume in the area.</p>	<p>Table 13.12 confirms Applicant commitment to prepare a Decommissioning Programme.</p>
		<p>SFF is of the view that there are no approved guidelines to set realistic criterion to define the magnitude of impact and sensitivity of receptors for commercial fisheries and referring it to ‘expert judgement’ would be unrealistic and misleading. Therefore, guidelines need to be adopted in consultation with the fishing industry representatives to address this issue.</p>	<p>The SFF position is noted.</p> <p>The commercial fisheries impact assessment methodology is based on well established good practice and utilised across OWF EIAs.</p> <p>At the time of assessment preparation, no formal commercial fisheries EIA guidance is available, though the Applicant has sought to expand on impact magnitude and receptor sensitivity criteria in response to the SFF feedback, with example indicators provided to further support category definition; see Section 13.8.</p>
		<p>In addition, SFF would like to see that the impact of the Development is assessed on individual fishing vessels affected by the Development versus the whole fleet/fishery.</p>	<p>The SFF position is noted.</p> <p>Potential impacts on commercial fisheries are assessed at a receptor group level; in the case of commercial fisheries this means that impacts are assessed at a fishing fleet level. This approach to assessment reflects standard EIA practice. The assessment does take into consideration the scale of those</p>

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			fleets in terms of number of vessels active within them. Assessing potential impacts on individual vessels is not considered appropriate given both the challenges in gathering data to inform assessment, and the commercial sensitivities around presenting assessment findings.
		SFF notes that the ‘Impacts to benthic ecology due to heat from subsea electrical cables’ has been scoped out. The Applicant has provided references to limited studies on this topic that some show that electrical cables emit heat. As there is no robust scientific evidence to reject the impacts of heat on benthic ecology; therefore, SFF would like to see the ‘Impacts to benthic invertebrates due to thermal emissions from subsea electrical cables’ to be scoped in. Any temperature change in the invertebrate’s habitat would have adverse effects on their behaviour and increase their mortality rate.	See Volume 2, Chapter 8: Benthic Ecology for a response.
		We also propose that the ‘Removal of hard substrates’ during construction should be scoped in as ‘seabed preparation’ for cabling (IACs, interconnector and export cables) require seabed disturbance of at least (25m width) along each cable. Foundation works also require seabed preparation, based on the size of the foundations, resulting in hard substrate removal.	See Volume 2, Chapter 8: Benthic Ecology for a response.
		The ‘impacts to fish and shellfish species due to entanglement’ during construction and decommissioning should also be scoped in as construction and decommissioning also take a considerable amount of time (c.5 years for this Proposed Development for construction only).	Impact scoped out as Proposed Development is fixed foundation.
		SFF furthermore note from sub-section 10.4.14 (p169) that the Scoping Boundary including both the Array Area and	See Volume 2, Chapter 9: Fish and Shellfish Ecology for a response.

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		<p>Export Cable Corridor totally overlaps with the spawning and nursery grounds of some commercially important demersal and pelagic fish species (including, cod, haddock, whiting, herring and sandeel). Therefore, we propose any survey activities and other seabed disturbances should be undertaken outwith spawning and nursery periods of the above-mentioned fish species to avoid juvenile fish mortality.</p>	
		<p>SFF note from sub-sections 9.4.3 (p128, Benthic Ecology) that the Local Benthic Ecology Study Area seabed is suitable for herring spawning. Therefore, the SFF are concerned about the Development impacts on all commercial value fish species in the area, especially on the herring which are also particularly sensitive to noise impacts on hearing through the swim bladder.</p>	<p>See Volume 2, Chapter 9: Fish and Shellfish Ecology for a response.</p>
		<p>We are of the view that any activities on herring spawning habitat are prohibited based on the ‘ICES Advice on fishing opportunities, catch, and effort Greater North Sea ecoregion’ published 31 May 2024. Therefore, SFF propose the above-mentioned ICES Advice to be taken into account and acted upon at determination stage. The link to ICES Advice on Greater North Sea herring is provided as follows: North Sea herring ICES Advice.</p>	<p>See Volume 2, Chapter 9: Fish and Shellfish Ecology for a response.</p>
		<p>SFF notes from Table 13.2 (p319) that ‘Physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging’ has been scoped in. We agree with this being scoped in; however, since snagging in some limited cases can result in human casualties, we propose that the possibility of a loss of life should also be highlighted as a risk of snagging hazards not just to fishing gear.</p>	<p>The physical presence of Offshore Infrastructure on the seabed represents potential snagging points for fishing gear and could lead to damage to, or loss of, fishing gear. This potential for damage or loss to fishing gear is assessed in Section 13.10.</p> <p>The safety aspects including potential loss of life as a result of snagging risk are</p>

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			assessed within Volume 2, Chapter 14: Shipping and Navigation.
		The EIA should take a precautionary approach/worst case scenario by assuming that fishing cannot occur within the floating wind farm.	The commercial fisheries assessment is based on a fixed foundation MDS, as confirmed in Section 13.7 of this chapter.
		SFF appreciates the Applicants commitment to use longer term data in the EIA. We reiterate the importance of pre-EU-exit data to be utilised for the EIA Report to present a realistic baseline of fishing activities within the study area, as some types of fisheries such as small haddock have been curtailed post EU-exit.	The advice regarding baseline data sources has been noted and applied in the EIA. This is evidenced by confirmation of the datasets used to characterise the baseline provided in Table 13.5.
		Fishing plotter data from fishermen, SFF and associations should be used as AIS and VMS data do not represent all fishing activities within the study area. In general collection of fishing plotter data (screen shots) from the fisheries organisations, and any specific data from smaller vessels that are not required to use AIS or VMS is recommended.	<p>The advice regarding baseline data sources has been noted and applied in the EIA. This is evidenced by confirmation of the datasets used to characterise the baseline provided in Section 13.6 of this chapter.</p> <p>Fishing vessel plotter data has been sourced from fishing industry representatives and has informed the characterisation of the baseline and impact assessment.</p>
		We would appreciate the inclusion of ‘the FMMS’ to be developed and adopted pre-consent in consultation with fishing industry to ensure all fishing industry’s concerns are considered and addressed accordingly.	An FMMCP has been prepared in support of the consent application. This is presented in Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan. The fishing industry has been engaged in development of the FMMCP.
		As part of the proposed commitments, there is no measure for disruption payments for fishing vessels. SFF suggest that a cooperation agreement should be considered for both the static and mobile gears where they are required to be relocated, or the impact is deemed to be significant.	<p>Table 13.12 confirms Applicant commitment to adhere to this request.</p> <p>Approaches to mitigating potential impacts of the Proposed Development on commercial fisheries are presented in</p>

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			Section 13.9 and throughout Section 13.10, and in Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan.
		No mention has been made to mitigation once operational and loss of fishing opportunities to the fishing industry within the floating section of the proposed array.	The commercial fisheries assessment is based on a fixed foundation MDS, as confirmed in Section 13.7 of this chapter.
		In relation to 'Development of and adherence to a Vessel Management Plan (VMP) and NSP), that will include Notice to Mariners (NtM)'. We suggest that NtM are issued in sufficient time to avoid any disruptions to fishing activities in the intended area.	Table 13.12 confirms Applicant commitment to adhere to this request.
		Utilise the services of an Offshore Fisheries Liaison Officer (OFLO) with sufficient knowledge of fisheries and fishers that utilise the development area.	Table 13.12 confirms Applicant commitment to adhere to this request.
		SFF notes from Habitats Regulations Appraisal (HRA) Screening Report, 'Chapter 7. Summary of LSE' (p193) that some Likely Significant Effects (LSE) as a result of the Proposed Development alone and/or in combination with other plans or projects have been identified. A total of 10 Special Areas of Conservation (SACs) and 105 Special Protected Areas (SPA) and Ramsar sites (80 SPAs and Ramsar sites with marine ornithological features, 19 SPA and Ramsar sites with onshore ornithological features and 6 SPAs and Ramsar sites with both marine and onshore ornithological features) are being taken forward for consideration in the Report to Inform Appropriate Assessment (RIAA).	This response is noted. See RIAA, Part 2: Special Areas of Conservation (TWP-BOW-RPS-ENV-RPT-00014) and RIAA, Part 3: Special Protection Areas and Ramsar Sites (TWP-BOW-RPS-ENV-RPT-00015) for more information.
		Although, if needed, nature compensation measures would be proposed in RIAA, we would like to reiterate that we oppose any nature compensation measures to offset the environmental damage from offshore wind developments (that impose any type of restriction) on commercial	This response is noted.

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		<p>fisheries. It is unconscionable that the fishing industry should be expected to pay the price for the environmental harms of the offshore wind industry.</p> <p>The SFF stresses that our primary concern is protecting the rights of fishermen to safely, effectively and efficiently undertake their trade, and this is the cornerstone of our response. Our position is that fishing activities should continue unaffected and unharmed post-development. If impacted fishermen are denied the right to earn their living, SFF will not support the proposal of any windfarm developments, therefore I reiterate that we strongly object to this application.</p>	<p>Position noted. The Applicant is committed to engaging collaboratively with the fishing industry to avoid, reduce, and where necessary appropriately mitigate impacts so that livelihoods are protected alongside the delivery of offshore wind.</p>
09/10/2025	<p>SFF, SWPFA, and SPFA, RPS, NiMa Consultants Ltd Blackhall & Powis</p> <p>Bowdun Offshore Wind Commercial Fisheries EIA, Teams meeting</p>	<ul style="list-style-type: none"> • Bowdun project update provided to stakeholders. • Presentation of commercial fisheries EIA baseline to fishing industry representatives. • SFF/SWFPA took an action to share further member vessel plotter data confidentially, in particular to capture latest scallop dredge activity relevant to the Proposed Development. • Landings by the demersal seine fleet from the Local Commercial Fisheries Study Area were higher than anticipated by fishing industry representatives. • Noted that a FMMCP will be prepared for the Proposed Development and engaged upon with the fishing industry prior to application. • SFF/SWFPA requested that local unaffiliated fishers be included in consultation on the FMMCP. • SFF suggested the Proposed Development consider participating in the recently launched Horizon Watch scheme. 	<p>Fishing vessel plotter data has been sourced from fishing industry representatives and has informed the characterisation of the baseline and impact assessment.</p> <p>An FMMCP has been prepared in support of the consent application. This is presented in Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan. The fishing industry has been engaged in development of the FMMCP.</p> <p>The Applicant is supportive of the SFF-led Horizon Watch initiative, an information bulletin intended to assist Scottish fishermen by providing advance awareness of proposed subsea cable routes and other installations. The Applicant will continue to monitor the development of Horizon Watch and engage with the initiative where it is considered appropriate.</p>

13.5 Data Sources

13.5.1 Commercial fisheries information and data has been reviewed and analysed to inform this commercial fisheries baseline. In addition, consultation with commercial fisheries industry representatives has been carried out to aid the collection of baseline information.

Desktop Study

13.5.2 For the purposes of this chapter, a desk-based review was undertaken using relevant spatial and scientific data sources.

13.5.3 These existing data sets and literature encompassing the Local and Regional Commercial Fisheries Study Areas, are presented in Table 13.5.

13.5.4 Data has been sourced from ICES, the EU Data Collection Framework (DCF), the Marine Directorate NMPI, the UK Marine Management Organisation (MMO), the European Maritime Safety Agency (EMSA), the SPFA and SFF.

13.5.5 Where data sources allow, a five to ten year (or longer) trend analysis has been undertaken, using the most recent annual datasets available at the time of writing. The temporal extent of this time period is dependent on each data source analysed (e.g. 2012 to 2016; 2016 to 2020; or 2010 to 2024).

13.5.6 Relevant literature from several sources has also been reviewed in the preparation of this report. A full list of references is provided at the end of this report and are cited within the text where appropriate.

13.5.7 Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report includes full details of the analysis undertaken to develop the commercial fisheries baseline.

Table 13.5: Summary of Key Data Sources

Title	Source	Extent	Year	Author
Landings Statistics				
Landings statistics data for UK registered vessels, with data query attributes for: landing year; landing month; vessel length category; ICES rectangle; vessel/gear type; port of landing; species; live weight (t); and value (£)	MMO	UK waters	2010 to 2024	MMO, annual landings statistics publications
Landings statistics for EU registered vessels with data query attributes for: landing year; landing quarter; ICES rectangle; vessel length; gear type; species; and, landed weight (t)	EU DCF database	EU waters	2023	EU DCF
Spatial Data				
VMS data for UK registered vessels ≥15 m length. Note that UK vessels ≥12 m in length have VMS on board,	MMO	UK waters	2022a	MMO

Title	Source	Extent	Year	Author
however, to date, the MMO provide amalgamated VMS datasets for ≥15 m vessels only. VMS data sourced from MMO displays the first sales value (£) of catches				
VMS data for EU registered vessels ≥12 m length. VMS data sourced from ICES displays the surface Swept Area Ratio of catches by different gear types and covers EU (including UK) registered vessels 12 m and over in length. Surface Swept Area Ratio indicates the number of times in an annual period that a demersal fishing gear makes contact with (or sweeps) the seabed surface. Surface Swept Area Ratio provides a proxy for fishing intensity	ICES	EU waters	2022	ICES
Positional data for Scottish registered vessels ≥12 m length	Marine Scotland MAPS NMPi	Scottish waters	2022	Marine Scotland
Fishing intensity based on VMS and landings data for UK vessels ≥15 m in length for squid, demersal species, Nephrops and scallops	Marine Scotland MAPS NMPi	Scottish waters	2013	Kafas <i>et al.</i>
Fishing vessel route density, based on vessel AIS positional data. AIS is required to be fitted on fishing vessels ≥15 m length	EMSA	EU waters	2024	EMSA
Norwegian vessels over 15 m in length VMS data by gear type	Barents Watch	EU (including Norwegian) waters	2024	Barents Watch
Surveillance data indicating vessel nationality and gear type for actively fishing vessels	NMPi	Scottish waters	2024	Marine Directorate
SPFA VMS data for Scottish pelagic trawl member vessels	SPFA	Scottish waters	2024	SPFA [Provided direct to chapter author following data request]
SFF vessel plotter data indicating location of fishing	SFF	Proposed Development	2025	SFF [Confidential; provided direct to chapter author]

Title	Source	Extent	Year	Author
				following data request]
North and East Coast Regional Inshore Fishery Group (N&EC RIFG) mapping of fishing activity and critical habitats within 12 nm of the coast in the N&EC RIFG area	N&EC RIFG	N&EC RIFG waters	2021	Shelmerdine and Mouat
Fisheries Sensitivity Mapping and Displacement Modelling (FiSMaDiM)	Centre for Environment, Fisheries and Aquaculture Science (Cefas)	UK waters	2025	Cefas
Vessel traffic (AIS and radar) survey data	Nash Maritime	Array Area plus 10 nm buffer	June/July 2023, January 2024, July 2025 and December 2025	Nash Maritime, 2024 and 2025

Site-Specific Surveys

- 13.5.8 No site-specific surveys have been undertaken to inform the EIA for commercial fisheries. Baseline data sources have been validated via engagement with fisheries stakeholders and by the results of site-specific vessel traffic surveys that are described in Volume 2, Chapter 14: Shipping and Navigation.

13.6 Baseline Environment

Overview of Baseline Environment

- 13.6.1 A summary of the commercial fisheries baseline environment is provided in the following sections. Full details of the analysis undertaken to develop the commercial fisheries baseline is provided in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report.

Overview of Landings

- 13.6.2 Landings over the period 2010 to 2024 are presented in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report. For the purposes of this summary of the baseline description, focus is given to the most recent datasets across a five-year period (2020 to 2024), with context for longer term trends provided where relevant.
- 13.6.3 On average, £6.5 million in first sales value is landed from the Local Commercial Fisheries Study Area per annum, based on five years from 2020 to 2024. Peak landings occurred in 2023 at a value of £9.5 million. The average annual value landed from the Regional Commercial Fisheries Study Area is £31 million, peaking in 2023 at £41.7 million (Figure 13.2).

13.6.4 Trends in landings from the Local Commercial Fisheries Study Area show a broadly increasing value trend across 2020 to 2024. Landings values in 2024 are lower than those in 2023, though still higher than across the 2020 to 2022 period. It is noted that the time period of the baseline data analysis includes years impacted by the COVID-19 Pandemic, specifically 2020 and 2021 when restrictions affected normal business operations and market trade. Landings at a national level were seen to decline over this period. For example, the total first sales value of commercial landings from Scottish vessels decreased from a high of £735 million in 2016, to a low of £520 million in 2020 due to the impacts of the COVID-19 Pandemic (Scottish Government, 2023). The total value landed by Scottish vessels has since increased, reaching £617 million in 2022.

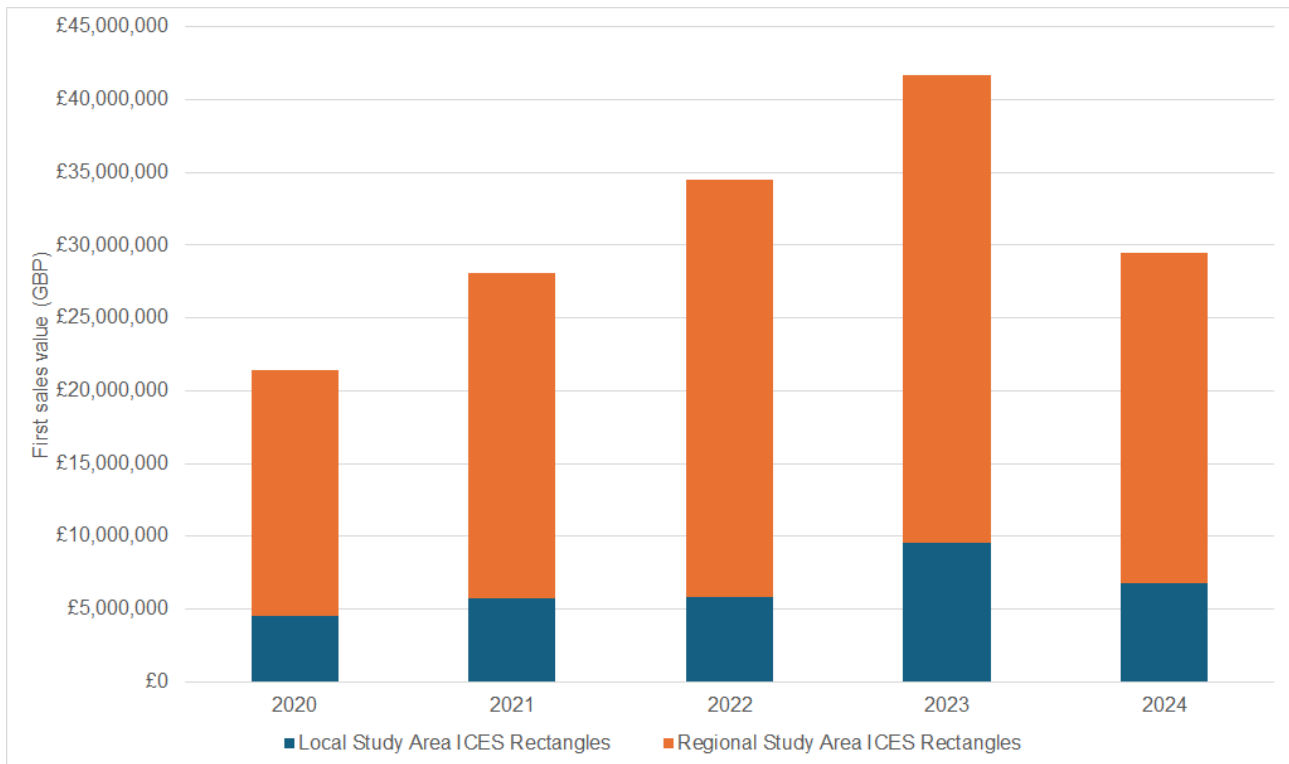


Figure 13.2: Annual Landed Value from the Regional Commercial Fisheries Study Area Indicating Landings from the Local Study Area (shown in navy) and from the Other ICES Rectangles Within the Regional Study Area (shown in orange) (data source: MMO, 2024)

13.6.5 The statistics as depicted in Figure 13.3 indicate that lobster *Homarus gammarus*, king scallop *Pecten maximus*, brown crab *Cancer Pagurus* and haddock *Melanogrammus aeglefinus* are the most economically important species as demonstrated by landed value (with an annual average landed value of £2 million, £1.3 million, £966,000 and £817,000 respectively across 2020 to 2024). Landings of these species have varied annually across the 2010 to 2024 time series.

13.6.6 Landings of king scallop peaked in 2015, remained high in 2016 and have dropped since then, although remain a high value species in the Local Commercial Fisheries Study Area. Landings of lobster have remained relatively consistent over the time period with generally higher prices and values noted

from 2016 onwards. The landed weight of brown crab has shown decline, yet the landed value has increased.

- 13.6.7 Landings of haddock increased substantially from 2021 to 2022, with further sustained growth in 2023 reaching annual landings valued at £2.3 million, compared to £120,000 in 2021. In 2024, annual landings value decreased to £615,000. Landings of Nephrops *Nephrops norvegicus*, velvet crab *Necora puber*, herring *Clupea harengus*, squid *Loligo* spp. and mackerel *Scomber scombrus* are also important to the Local Commercial Fisheries Study Area. Herring landings have varied substantially across the time series, with relatively low catches from 2010 to 2015, no catches from 2016 to 2022, and a substantial catch of £1.8 million in 2023.
- 13.6.8 Most landings by UK fishing vessels are made by vessels registered in Scotland (94% by value), with small proportions by English, Northern Irish and Welsh vessels. Key local landings ports include Arbroath, Peterhead, Montrose, Fraserburgh, Gourdon, Stonehaven and Aberdeen.
- 13.6.9 Landed value by gear type for the Local Commercial Fisheries Study Area is shown in Figure 13.4. Landings are primarily associated with pots, demersal trawls and scallop dredges.

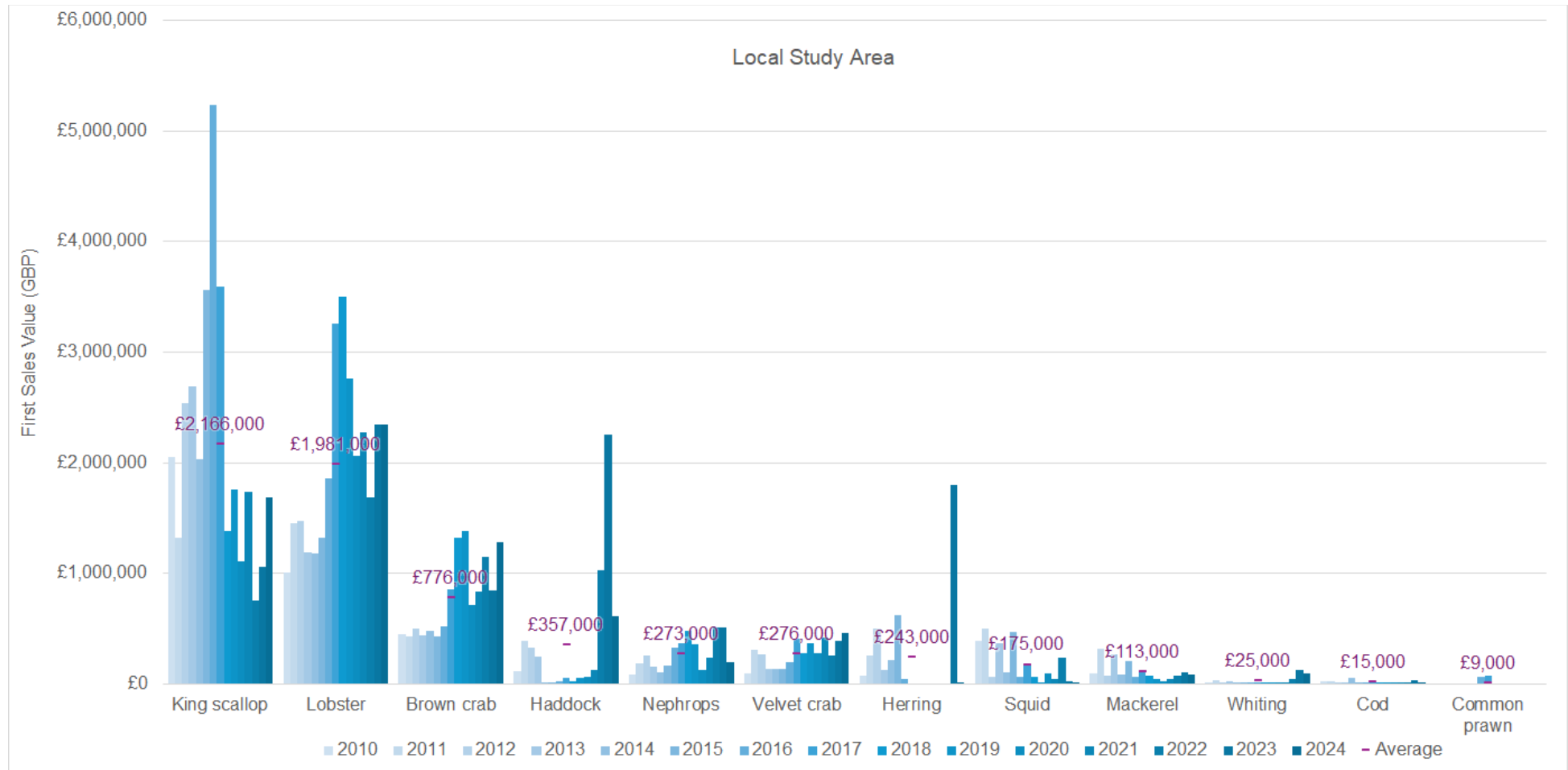


Figure 13.3: Key Species by Annual Landed Value (£) (2010 to 2024) from the Local Commercial Fisheries Study Area (Source: MMO, 2011 to 2025)

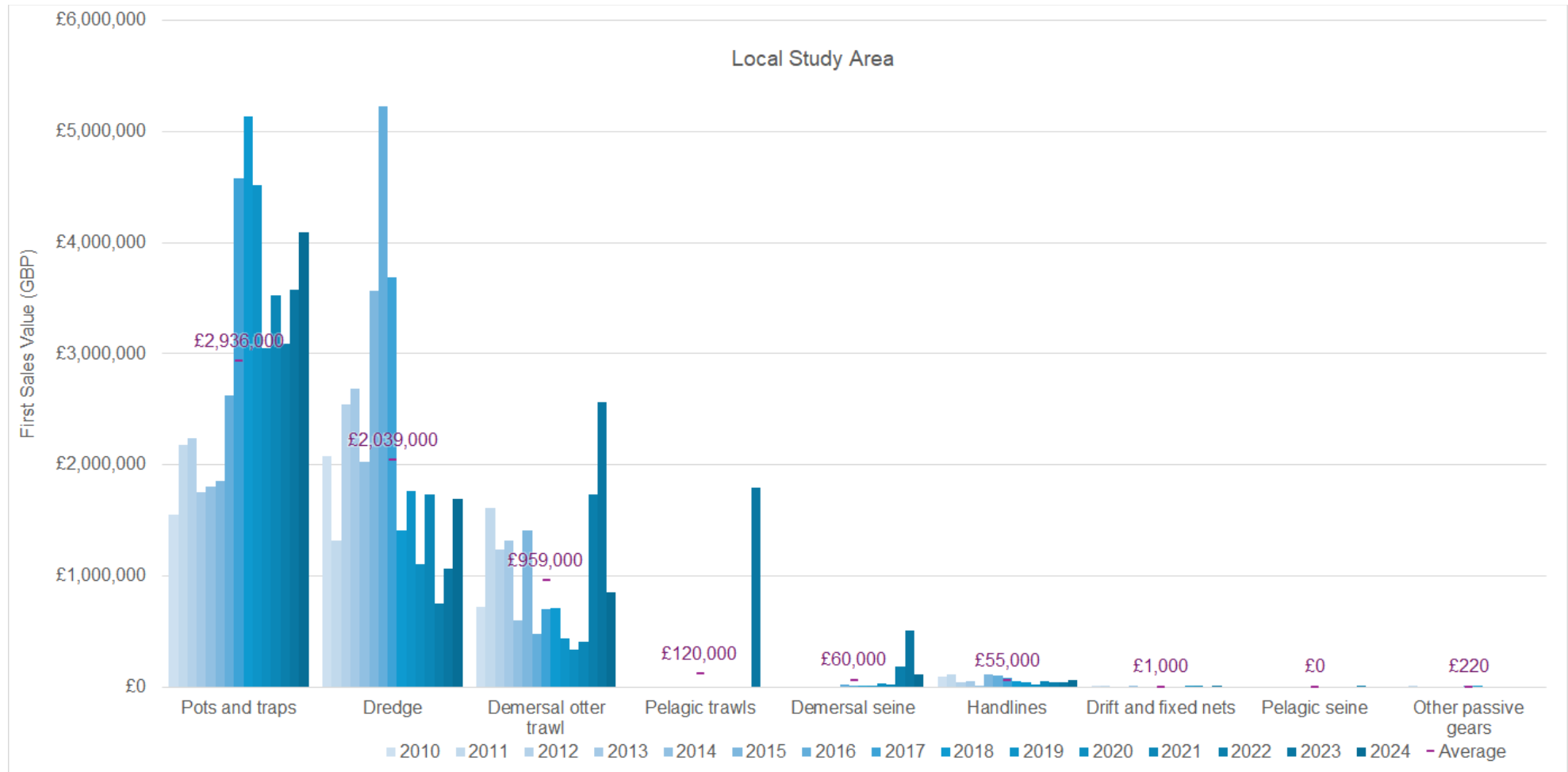


Figure 13.4: Annual Landed Value (£) (2010 to 2024) by Gear Type from the Local Commercial Fisheries Study Area (Source: MMO, 2011 to 2025)

Fishing Activity by Gear Type

Potting Fishery

- 13.6.10 The potting fishery primarily targets brown crab, lobster and velvet crab and accounts for £3.5 million first sales value landed annually from the Local Commercial Fisheries Study Area based on averages landings across 2020 to 2024. Landings by potting vessels account for 60% of the landed value from the Local Commercial Fisheries Study Area.
- 13.6.11 In the Local Commercial Fisheries Study Area, 85% of landings are attributed to ICES rectangle 42E7 with which the nearshore portion of the Export Cable Corridor overlaps. Spatial data for potting activity is presented in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report. The data indicates limited activity by potting vessels over 15 m length and the Proposed Development, with no recorded activity in the Array Area. Data indicates the presence of smaller vessel (under 12 m length) activity along the local coastline inside of the 6 nm limit, including high value activity in the very nearshore portion of the Export Cable Corridor. Feedback from the CFLO and from fisheries stakeholders has indicated a trend of potting activity extending further offshore, though this is not yet evidenced in publicly available data sources.
- 13.6.12 Landings by the potting fishery from the Local Commercial Fisheries Study Area are made year-round with a peak in August and September. Landings are made into several local ports including Arbroath, Montrose, Gourdon and Stonehaven.

Scallop Dredge Fishery

- 13.6.13 Within the Local Commercial Fisheries Study Area, the scallop dredge fishery operates across all three ICES rectangles. The scallop dredge fishery accounted for £1.3 million first sales value landed annually on average from the Local Commercial Fisheries Study Area between 2020 and 2024.
- 13.6.14 Spatial data presented in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report confirms that the scallop dredge fishery operates throughout the Local Commercial Fisheries Study Area. Effort is focused on grounds located to the south-west of the Array Area, which overlap with portions of the Export Cable Corridor, and to the north and north-east of the Array Area, with potential for relatively low levels of scallop dredge activity overlapping the northern part of the Array Area. This spatial distribution of scallop dredge activity is further validated by fishing vessel plotter data provided to the Applicant in confidence. The data depicts repeated scallop dredge vessel activity across portions of the Export Cable Corridor – particularly around the 6 nm limit - with scallop dredge tows generally running in parallel to the coastline. The same data indicates limited and more sporadic activity in the Array Area.
- 13.6.15 Landings by scallop dredge vessels are made into Peterhead, Fraserburgh and Aberdeen. Landings data indicates peak scallop landings across April to June, with lower levels of landings in winter months.

Demersal Otter Trawl Fishery

- 13.6.16 Within the Local Commercial Fisheries Study Area demersal trawlers predominantly target demersal whitefish such as haddock, and Nephrops. Data also indicates some squid landings. The majority of landings are attributed to ICES rectangle 43E8 with which the northern extent of the Array Area overlaps. The demersal trawl fishery accounted for £1.2 million first sales value landed annually on average from the Local Commercial Fisheries Study Area between 2020 and 2024. Landings values attributed to demersal trawl have increased markedly over the time period within the Local Commercial Fisheries Study Area, peaking in 2023 at £2.6 million.
- 13.6.17 Spatial data presented in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report indicates limited demersal trawl activity overlapping with the Array Area with activity focused to the north. Data indicates some overlap of low-moderate levels of demersal trawl activity with the nearshore portion of the Export Cable Corridor, inside of the 6 nm limit, where landings data indicates vessels are targeting Nephrops and to a lesser extent, squid. The Export Cable Corridor is noted to lie outside of defined Nephrops Functional Units, to the north of the Firth of Forth Functional Unit (Scottish Government, 2022b).
- 13.6.18 Landings data indicates a June/July peak in landings values attributed to demersal trawlers in the Local Commercial Fisheries Study Area. Landings are primarily made into Peterhead, with some into Arbroath, Methil and Leven, and Fraserburgh.

Demersal Seine Fishery

- 13.6.19 Within the Local Commercial Fisheries Study Area, the demersal seine fishery primarily operates in ICES rectangle 43E8. It accounted for £172,000 first sales value landed annually on average from the Local Commercial Fisheries Study Area between 2020 and 2024. Landings values attributed to demersal seine have increased markedly over the time period within the Local Commercial Fisheries Study Area, peaking in 2023 at £506,000.
- 13.6.20 The demersal seine fishery targets haddock and landings data indicates a peak in landed value in June. Almost all landings are made into Peterhead.
- 13.6.21 Spatial data presented in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report does not indicate any overlap of the demersal seine activity with the Proposed Development, with activity located to the north and east.

Pelagic Trawl Fishery

- 13.6.22 Within the Local Commercial Fisheries Study Area, landings data indicates that across the 2020 to 2024 period, landings by pelagic trawls – of herring – occurred only in August and September 2023 with a total value of £1.8 million. Landings were made into Lerwick and Egersund in Norway, with a smaller portion of catch landed to Peterhead.

- 13.6.23 Spatial data indicates no overlap of pelagic trawl activity with the Proposed Development, with any activity likely to be located to the north and east.

Handline Fishery

- 13.6.24 Within the Local Commercial Fisheries Study Area, the handline (or ‘jigging’) fishery primarily operates in nearshore areas within ICES rectangles 42E7 and 43E8. It accounted for £44,000 first sales value landed annually on average from the Local Commercial Fisheries Study Area between 2020 and 2024, with peak landings recorded in 2024 valued at £67,000.
- 13.6.25 The handline fishery targets mackerel and landings data indicates that this is an exclusively summer fishery, with landings across July to September. Landings are made into Peterhead, Boddam, Arbroath and Johnshaven.
- 13.6.26 Spatial data presented in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report indicates potential for some overlap of jigging activity with the nearshore portion of the Export Cable Corridor inside of 3 nm and indicates that key jigging grounds are located further south, off the coastline immediately north of Arbroath.

Key Commercial Fisheries Receptors

- 13.6.27 The principal fishing fleets identified as operating across the Local and Regional Commercial Fisheries Study Areas are listed in Table 13.6.

Table 13.6: Summary of Fishing Fleets Active in the Study Areas, and Identified as Commercial Fisheries EIA Receptors

Fishing Fleet	Array Area	Export Cable Corridor
UK fishing fleets		
UK potting	Scottish registered vessels, under and over 10 m length, targeting brown crab and other shellfish – no/very low levels of activity in the Array Area.	Scottish registered vessels, under and over 10 m length, targeting brown crab and other shellfish – variable levels of activity across discrete sections of the Export Cable Corridor.
UK scallop dredge	Primarily Scottish registered vessels, over 15 m length, targeting king scallop – low levels of activity in the Array Area.	Primarily Scottish registered vessels, over 15 m length, targeting king scallop – high levels of activity across discrete sections of the Export Cable Corridor.
UK demersal trawl	Primarily Scottish registered vessels, over 15 m length, targeting haddock – no activity within the Array Area but present in the wider Local and Regional Commercial Fisheries Study Areas.	Primarily Scottish registered vessels, under and over 15 m length, targeting Nephrops and squid – some activity across discrete sections of the Export Cable Corridor inside of 6 nm limit.
UK demersal seine	Primarily Scottish registered vessels, over 15 m length, targeting haddock – no activity within the Array Area but present in the wider Local and Regional Commercial Fisheries Study Area.	No activity.

Fishing Fleet	Array Area	Export Cable Corridor
UK handline/gear with hooks	No activity.	Scottish registered vessels, under 12 m length, targeting mackerel – potential for activity across nearshore section of the Export Cable Corridor.
UK pelagic trawl	Scottish registered vessels, over 40 m length, targeting herring – no activity within the Array Area but present in the wider Local and Regional Commercial Fisheries Study Areas.	Scottish registered vessels, over 40 m length, targeting herring – no activity within the Export Cable Corridor but present in the wider Local and Regional Commercial Fisheries Study Areas.
Non-UK fishing fleets		
EU pelagic trawl	Highly sporadic landings of herring and mackerel by vessels registered in Ireland, Denmark, Netherlands, Germany and France. Very unlikely to be active within the Array Area but may be present in the wider Regional Commercial Fisheries Study Area.	Highly sporadic landings of herring and mackerel by vessels registered in Ireland, Denmark, Netherlands, Germany and France. Very unlikely to be active within the Export Cable Corridor but may be present in the wider Regional Commercial Fisheries Study Area.

Future Baseline Scenario

- 13.6.28 The EIA Regulations require that ‘a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the Project as far as natural changes from the baseline scenario can be assessed with reasonable effort, on the basis of the availability of environmental information and scientific knowledge’ is included within the Offshore EIA Report.
- 13.6.29 Commercial fisheries patterns change and fluctuate based on a range of natural and management-controlled factors. These factors include the following:
- Response to existing offshore developments, including other ScotWind projects and Innovation and Targeted Oil & Gas projects.
 - Market demand: Commercial Fishing fleets respond to market demand, which is impacted by a range of factors, such as changes in consumer preferences and international trade policies, and including the 2020 to 2021 COVID-19 Pandemic which disrupted the seafood supply chain with, for example, lockdowns and restaurant closures.
 - Market prices: Commercial Fishing fleets respond to market prices by focusing effort on higher value target species when prices are high.
 - Stock abundance: fluctuation in the biomass of individual species stocks in response to the status of the stock, recruitment, natural disturbances (e.g. due to storms), climate change, and changes in fishing pressure etc.
 - Fisheries management: including new management for specific species where overexploitation has been identified, or changes in Total Allowable

Catches (TACs) leading to the relocation of effort, and/or an overall increase/decrease of effort and catches from specific areas.

- Environmental management: including the potential restriction of certain fisheries within protected areas. Consultation with fisheries stakeholders indicated potential for increased use of ‘lighter’ fishing gear in the future, such as seine nets, in response to perceived impacts of trawling.
- Improved efficiency and gear technology: with fishing fleets constantly evolving to reduce operational costs, e.g. by moving from beam trawl to demersal seine to respond to increasing fuel costs.
- Sustainability: with seafood buyers more frequently requesting certification of the sustainability of fish and shellfish products, such as the Marine Stewardship Council certification, industry is adapting to improve fisheries management and wider environmental impacts.

- 13.6.30 A recent example of how fisheries management can change the baseline relates to sandeel (*Ammodytidae*); the sandeel fishery has significantly reduced in the UK EEZ over the past five years, with very low quotas relevant for this area (i.e. sandeel area 4). It is noted that the UK Government has prohibited UK vessels from catching sandeel from the North Sea from the period 2021 to 2023. As of 2024, catching sandeel from the North Sea has been prohibited for all UK and non-UK vessels in the UK EEZ².
- 13.6.31 Another example of changing fisheries patterns relates to the recent prohibition of scallop dredging in the Dogger Bank SAC. Many of the UK scallop vessels that operate outside 12 nm will target areas throughout the UK, including central North Sea, English Channel, Irish Sea and West of Scotland. Restrictions on fisheries due to environmental management can displace the activity and also lead to higher reliance on existing grounds.
- 13.6.32 The variations and trends in commercial fisheries activity are an important aspect of the baseline assessment and forms the principal reason for considering up to five years of key baseline data. Given the time periods assessed, the future baseline scenario would typically be reflected within the current baseline assessment undertaken. However, in this case, existing baseline data do not capture any potential changes in commercial fisheries activity resulting from the withdrawal of the UK from the EU.
- 13.6.33 Following withdrawal, the UK and the EU have agreed to a Trade and Cooperation Agreement (TCA), applicable on a provisional basis from 01 January 2021. The TCA sets out fisheries rights and confirms that from 01 January 2021, and during a transition period until 30 June 2026, UK and EU vessels will continue to access respective EEZs (12 nm to 200 nm) to fish. In this period, EU vessels will also be able to fish in specified parts of UK waters between 6 nm to 12 nm.

² In Scottish waters this is imposed via [The Sandeel \(Prohibition of Fishing\) \(Scotland\) Order 2024](#); in English waters this is applied via Government-imposed closure / quota withdrawal rather than via a statutory instrument.

- 13.6.34 Twenty five percent of the EU's fisheries quota in UK waters will be transferred to the UK over the five-year transition period; most of this quota has already been transferred and distributed across the four nations of the UK. After the five-year transition there will be annual discussions on fisheries opportunities. Across the Regional Commercial Fisheries Study Area, where UK fisheries primarily target non-quota shellfish species, it is expected that fleets are unlikely to be impacted by quota transfers. It is possible that UK vessels will seek to exploit additional quota species opportunities, but vessels would need to access quota holdings.
- 13.6.35 Market changes have the potential to impact fishing activity in the Regional Commercial Fisheries Study Area; some of the catch landed by UK vessels is exported to EU markets (e.g. brown crab) and potential tariff/non-tariff barriers could affect which species are targeted and to what extent.
- 13.6.36 In relation to the effects of the COVID-19 Pandemic, MMO annual reporting notes that the effects of the pandemic on the UK fishing industry were felt from March 2020. The MMO UK Sea Fisheries Statistics 2021 report observes that an increase in overall UK landings quantity and value in 2021 (relative to 2020) largely reflected recovery from the COVID-19 Pandemic period and additional quota available to the UK fleet after leaving the EU (MMO, 2022b).
- 13.6.37 Commercial fisheries receptors (i.e. relevant fishing fleets) could theoretically be impacted by climate change over the lifetime of the Proposed Development. Increased sea temperature/change in pH levels have the potential to affect the distribution of commercially targeted fish and shellfish stocks in the Regional and Local Commercial Fisheries Study Areas. Scientific research to date indicates the following for key commercially targeted species (Núñez-Riboni *et al.*, 2019; OSPAR, 2023; European Environment Agency, 2024; Sailley *et al.*, 2025; and Garrett and Pinnegar, 2022):
- of relevance to the Nephrops fishery, most shellfish are sedentary but have a high tolerance to changes in temperature. Some warming in this part of the North Sea is unlikely to significantly impact this target species;
 - any evidence around scallops and how changes in temperature will impact upon them is varied and not conclusive; and
 - for white fish fisheries, such as those targeting haddock, climate change could have a large impact via warming sea, in turn reducing the area within the North Sea that is suitable for these fish species. This could cause fish to migrate further north, making areas of the northern North Sea more important as a fishery.
- 13.6.38 Changes in the distribution of target species may in turn affect Commercial Fishing activity in the Regional and Local Commercial Fisheries Study Areas over the long term; for example, altering fishing methods, targeted grounds and seasonal patterns in activity.

- 13.6.39 An increase in storm events may also directly impact fishing activity in the Regional and Local Commercial Fisheries Study Areas, with changes with seasonal fishing patterns in response to changes in weather and periods of safe fishing conditions.

Data Limitations and Assumptions

- 13.6.40 Limitations of landings data include the spatial size of ICES rectangles, which can misrepresent actual activity across the Proposed Development, and care is therefore required when interpreting the data.
- 13.6.41 It is noted that all commercial landings by UK registered vessels are subject to the Registration of Buyers and Sellers (RBS) legislation and therefore landings by UK vessels of all lengths are recorded within the MMO Integrated Fisheries System Holding (iFish) database. Whilst it is recognised that there is no statutory requirement for owners of vessels 10 m and under to declare their catches, registered buyers are legally required to provide sales notes of all commercially sold fish and shellfish due to the 2005 Registration of Buyers and Sellers of First Sale Fish Scheme (RBS legislation) (MMO, 2021). The RBS legislation is applicable to licenced fishing vessels of all lengths and requires name and Port Letters and Numbers (PLN) of the vessel which landed the fish to be recorded in relation to each purchase. For the 10 m and under sector, landing statistics are recorded on sales notes provided by the registered buyers (MMO, 2021). Information that may not be formally recorded on the sales note, such as gear and fishing area, is added by coastal staff based on local knowledge of the vessels they administer. For example, from observations of the vessel during inspections at ports or from air and sea surveillance activities as well as discussions with the owner and/or operator of the vessel (MMO, 2021). There are occasions when fish are not subject to the RBS legislation and therefore are not represented within the MMO iFish landings database, for instance when purchases of first sale fish direct from a fishing vessel are wholly for private consumption, and less than 25 kg is bought per day.
- 13.6.42 Lack of recent landings statistics for EU (non-UK) fleets is also recognised as a data limitation; based on the most recent European Commission data call, more recent (from 2017 onwards) landings data is no longer available by ICES rectangle. Data at a scale of ICES division (the whole of the North Sea) is less useful to understand fishing activity specific to the area overlapping the Proposed Development.
- 13.6.43 Limitations of VMS data are primarily focused on the coverage being limited to vessels ≥ 15 m for MMO data. It is important to be aware that where mapped VMS data may appear to show inshore areas as having lower (or no) fishing activity compared with offshore areas, this is not necessarily the case, because VMS data does not include vessels typically operating in inshore areas (which typically comprises vessels < 15 m in length). To assist in mitigating the risk of under-representing smaller inshore vessels, site-specific vessel traffic survey data, comprising information on vessel movements gathered by AIS and radar, has been analysed alongside VMS data.

- 13.6.44 Fishing vessel route density data from the EMSA is based on AIS data, representing activity for vessels with AIS (≥ 15 m in length). A limitation of AIS data is that it does not distinguish between steaming and actively fishing; nevertheless, it provides corroboration for key fishing grounds and insight into transit routes to alternative fishing grounds.
- 13.6.45 Data limitations have been managed by ensuring accurate interpretation of the data and clear understanding of its scope, together with cross-referencing between data sources and consultation with the fishing industry. As data forms only part of the evidence base, the limitations identified are not considered to significantly affect the certainty, or reliability, of the impact assessments in Section 13.10.

13.7 Key Parameters for Assessment

Maximum Design Scenario

- 13.7.1 The MDS identified in Table 13.7 are those parameters expected to have the potential to result in the greatest effect on an identified receptor or receptor group. Any other development scenario within the PDE, will result in the same, or less, level of environmental effect. The scenario has been selected from the details provided in Volume 1, Chapter 3: Project Description.
- 13.7.2 In assessing the potential disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity, the assessment presented in this chapter draws on the findings of the fish and shellfish ecology assessment presented in Volume 2, Chapter 9: Fish and Shellfish Ecology. The linkages between this assessment and that in Volume 2, Chapter 9: Fish and Shellfish Ecology are clearly explained in Section 13.10.
- 13.7.3 In assessing potential effects on Commercial Fishing activity associated with the presence of project vessel activity and increased steaming times, the assessment presented in this chapter draws on information presented in Volume 2, Chapter 14: Shipping and Navigation. The linkages between this assessment and that in Volume 2, Chapter 14: Shipping and Navigation are clearly explained in Section 13.10.

Table 13.7: MDS Considered for Each Potential Impact as Part of the Assessment of Commercial Fisheries

Potential Impact	Phase*			MDS	Justification
	C	O	D		
Reduction in access to, or exclusion from established fishing grounds within the Array Area	✓	✓	✓	<p>MDS taken to be 67 x 15 MW scenario.</p> <p>Construction:</p> <ul style="list-style-type: none"> Construction phase to last up to 5 years, inclusive of pre-construction activities including boulder clearance, sandwave clearance and UXO clearance. Total Array Area: 187 km². <p><u>Safety zones:</u></p> <ul style="list-style-type: none"> 500 m Safety Zones around construction activities; 50 m Safety Zones around partially complete structures or complete structures; and Rolling 500 m safety zone for mobile installation vessels. <p><u>Wind Turbine Generators</u></p> <ul style="list-style-type: none"> Maximum number of Wind Turbines: 67; Wind Turbines seabed footprint based on up to 67 Wind Turbines on 3-legged suction bucket jacket foundations and with Scour Protection: 266,727 m² (0.27 km²); and Minimum turbine spacing: 1,038 m. <p><u>Offshore Substation Platforms:</u></p> <ul style="list-style-type: none"> Maximum number of OSPs: 3 (within the Array Area), including: <ul style="list-style-type: none"> Maximum OSP topside length x width based on three OSPs: 50 m x 40 m; and 	<p>Construction:</p> <p>The MDS represents the maximum duration and extent of fishing exclusion throughout the construction phase and, hence, the greatest potential to restrict access to fishing grounds.</p> <p>The construction phase footprint comprises the full permanent seabed area of structures, Scour Protection and cable protection plus the temporary footprint of preparatory works including seabed preparation. The impact area also incorporates Safety Zones around major construction activities.</p> <p>It is assumed that construction activities, and associated Safety Zones, could occur anywhere within the Array Area at any given time and it is therefore considered unlikely that fishing will resume in the Array Area during construction. Construction activities will be completed sequentially to some extent; installation of all infrastructure identified in the scenario to the left would not occur in parallel.</p>

Potential Impact	Phase*			MDS	Justification
	C	O	D		
				<ul style="list-style-type: none"> Maximum OSP seabed footprint based up to 3 OSPs with Scour Protection: 15,000 m². <p><u>Inter-Array Cable and Interconnector Cable:</u></p> <ul style="list-style-type: none"> Maximum IAC length on the seabed: 151 km; Maximum Interconnector Cable length: 36 km; Cable installation and burial technique: ploughing, jetting, cutting, dredging, or hybrid technique with lay then burial or simultaneous lay and burial; Cable protection: burial to target depth of 1.5 m and minimum of 0.5 m, or external cable protection (cable protection systems, rock dumping, rock bags, grout bags, concrete mattresses); Maximum seabed footprint of mechanical cable protection for IAC: 755,000 m²; Maximum seabed footprint of mechanical cable protection for interconnector cables: 180,000 m²; Maximum number of IAC crossings: 9; and Maximum number of Interconnector Cable crossings: 3. <p>O&M:</p> <ul style="list-style-type: none"> Operational lifetime: up to 30 years; and All other parameters as for the Construction phase above. <p><u>Maintenance activities:</u></p> <ul style="list-style-type: none"> 500 m Safety Zones around major maintenance activities; Array Area: up to 12 vessels at any one time will be involved over the duration of the O&M phase (up to 30 years) making a total of 588 return trips per year. In addition to this, a 	<p>O&M:</p> <p>The assessment assumes that fishing will be able to resume around and between infrastructure within the Array Area where possible, except for Safety Zones around infrastructure undergoing major maintenance or replacement. Furthermore, the individual decisions made by skippers with their own perception of risk will determine the likelihood of whether their fishing will resume within the Array Area throughout the O&M phase.</p> <p>Decommissioning:</p> <p>In the absence of detailed methodologies and schedules, decommissioning works and associated implications for commercial fisheries are considered analogous with those assessed for the construction phase.</p>

Potential Impact	Phase*			MDS	Justification
	C	O	D		
				<p>further number of vessels will undertake another 146 return trips spread over the 30-year O&M phase;</p> <ul style="list-style-type: none"> Up to 4,915 m of cable reburial may be required per year for repair of IACs; and Up to 2,040 m of cable reburial may be required per year for repair of Interconnector Cables. <p>Decommissioning: A Decommissioning Programme will be submitted to MD-LOT for consultation and approval. The Decommissioning Programme will be updated during the Project's lifespan to take account of changing best practice and new technologies.</p> <p>The approach for decommissioning is yet to be determined, however, for the purposes of this MDS, total removal of all infrastructure including buried cables and cable protection has been assumed, and as such the environmental impact of decommissioning will be the same if not lower than construction.</p>	
Reduction in access to, or exclusion from established fishing grounds within the Export Cable Corridor	✓	✓	✓	<p>Construction:</p> <ul style="list-style-type: none"> Construction period: Up to 5 years with export cable installation taking place across one year. <p><u>Safety zones:</u></p> <ul style="list-style-type: none"> 500 m Safety Zones around construction activities; and Rolling 500 m safety zone for mobile installation vessels. <p><u>Export Cables:</u></p> <ul style="list-style-type: none"> Up to 3 cables, each of up to 70 km in length; 	<p>Construction: The MDS represents the maximum duration and extent of fishing exclusion throughout the construction phase and, hence, the greatest potential to restrict access to fishing grounds.</p> <p>It is assumed that construction activities would not occur across the entirety of the Export Cable Corridor at any one time. Therefore, it is assumed that fishing is not prohibited from resumption in areas where construction</p>

Potential Impact	Phase*			MDS	Justification
	C	O	D		
				<ul style="list-style-type: none"> • Cable installation and burial technique: ploughing, jetting, cutting, dredging, with lay then burial or simultaneous lay and burial; • Cable protection: burial to target depth of 1.5 m and minimum of 0.5 m, or external cable protection (cable protection systems, rock dumping, rock bags, grout bags, concrete mattresses); • Maximum seabed footprint of mechanical cable protection for export cables: 1,050,000 m²; and • Maximum number of cable crossings: 6. <p>O&M:</p> <ul style="list-style-type: none"> • Operational lifetime: up to 30 years. <p><u>Export Cables:</u></p> <ul style="list-style-type: none"> • Up to 3 cables, each of up to 70 km in length; and • All other parameters as for the Construction phase above. <p><u>Maintenance activities:</u></p> <ul style="list-style-type: none"> • 500 m Safety Zones around major maintenance activities; • Rolling 500 m safety zone for mobile installation vessels; • Export Cable Corridor: up to 8 vessels at any one time will be involved over the duration of the O&M phase (up to 30 years) making a total of 125 return trips per year. In addition to this, a further number of vessels will undertake another 114 return trips spread over the 30-year O&M phase; and • Up to 6,390 m of cable reburial may be required per year for repair of Offshore Export Cables. 	<p>has not yet commenced or is completed.</p> <p>O&M: Given the intention to bury the export cable, it is assumed that fishing will resume throughout the O&M phase, with exception of Safety Zones around major maintenance activities. The MDS represents the maximum duration and extent of fishing exclusion throughout the O&M phase and hence the greatest potential to restrict access to fishing grounds.</p> <p>Decommissioning: In the absence of detailed methodologies and schedules, decommissioning works and associated implications for commercial fisheries are considered analogous with those assessed for the construction phase.</p>

Potential Impact	Phase*			MDS	Justification
	C	O	D		
				<p>Decommissioning: A Decommissioning Programme will be submitted to MD-LOT for consultation and approval. The Decommissioning Programme will be updated during the Project's lifespan to take account of changing best practice and new technologies.</p> <p>The approach for decommissioning is yet to be determined, however, for the purposes of this MDS, total removal of all infrastructure including buried cables and cable protection has been assumed, and as such the environmental impact of decommissioning will be the same if not lower than construction.</p>	
<p>Displacement leading to gear conflict and increased fishing pressure on adjacent grounds</p>	✓	✓	✓	<p>All phases: As described for the potential impact of 'reduction in access to, or exclusion from established fishing grounds' for both the Array Area and Export Cable Corridor.</p>	<p>Construction: The MDS represents the maximum duration and extent of fishing exclusion throughout the construction phase and, hence, the greatest potential to lead to displacement of fishing effort.</p> <p>O&M: The MDS represents the maximum duration and extent of fishing exclusion throughout the operational phase and, hence, the greatest potential to lead to displacement of fishing effort.</p> <p>Decommissioning: In the absence of detailed methodologies and schedules, decommissioning works and associated implications for commercial fisheries</p>

Potential Impact	Phase*			MDS	Justification
	C	O	D		
					are considered analogous with those assessed for the construction phase.
Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity	✓	✓	✓	All phases: As described for Volume 2, Chapter 9: Fish and Shellfish Ecology.	All phases: The MDS for fish and shellfish ecology receptors represents the maximum potential disturbance to commercial fisheries resources.
Increased vessel traffic associated with the Proposed Development within fishing grounds leading to interference with fishing activity	✓	✓	✓	Construction: <ul style="list-style-type: none"> Maximum number of return trips for vessels over the pre-construction period: 140; Maximum number of vessels on site at one time over the pre-construction period: 18; Maximum number of return trips for vessels over the construction period, in the Export Cable Corridor: 449; Maximum number of vessels on site at one time over the construction period, in the Export Cable Corridor: 16; Maximum number of return trips for vessels over the construction period, in the Array Area: 1,671; and Maximum number of vessels on site at one time over the construction period, in the Array Area: 25. O&M: <ul style="list-style-type: none"> Array Area: up to 12 vessels at any one time will be involved over the duration of the O&M phase (up to 30 years) making a total of 588 return trips per year. In addition to this, a further number of vessels will undertake another 146 return trips spread over the 30-year O&M phase; and 	Construction: The maximum number of Wind Turbines and associated infrastructure will lead to the highest level of construction activities and therefore highest level of construction vessel round trips. The maximum number of vessels transits and the maximum duration of the construction would result in the greatest potential for interference. O&M: The maximum number of Wind Turbines and associated infrastructure will lead to the highest level of maintenance activities and therefore highest level of maintenance vessel round trips.

Potential Impact	Phase*			MDS	Justification
	C	O	D		
				<ul style="list-style-type: none"> Export Cable: up to 8 vessels at any one time will be involved over the duration of the O&M phase (up to 30 years) making a total of 125 return trips per year. In addition to this, a further number of vessels will undertake another 114 return trips spread over the 30-year O&M phase. <p>Decommissioning: A Decommissioning Programme will be submitted to MD-LOT for consultation and approval. The Decommissioning Programme will be updated during the Project’s lifespan to take account of changing best practice and new technologies.</p> <p>The approach for decommissioning is yet to be determined, however, for the purposes of this MDS total removal of all infrastructure including buried cables and cable protection has been assumed, and as such the environmental impact of decommissioning will be the same if not lower than construction.</p>	<p>Decommissioning: In the absence of detailed methodologies and schedules, decommissioning works and associated implications for commercial fisheries are considered analogous with those assessed for the construction phase.</p>
<p>Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Proposed Development</p>	✓	✓	✓	<p>All phases: As described for the potential impact of ‘reduction in access to, or exclusion from established fishing grounds’ for both the Array Area and Export Cable Corridor.</p>	<p>Construction: The MDS represents the maximum duration and extent of fishing exclusion throughout the construction phase and, hence, the greatest potential for additional steaming to alternative fishing grounds.</p> <p>O&M: The MDS represents the maximum duration and extent of fishing exclusion throughout the operational phase and, hence, the greatest potential for</p>

Potential Impact	Phase*			MDS	Justification
	C	O	D		
					<p>additional steaming to alternative fishing grounds.</p> <p>Decommissioning: In the absence of detailed methodologies and schedules, decommissioning works and associated implications for commercial fisheries are considered analogous with those assessed for the construction phase.</p>
<p>Increased snagging risk, which could result in loss or damage to fishing gear</p>	✓	✓	✓	<p>All phases: As described for the potential impact of ‘reduction in access to, or exclusion from established fishing grounds’ for both the Array Area and Export Cable Corridor.</p>	<p>Construction: The MDS represents the maximum number and extent of project infrastructure being constructed and, hence, the greatest potential for gear snagging to occur.</p> <p>O&M: The MDS represents the maximum number and extent of project infrastructure and, hence, the greatest potential for gear snagging to occur.</p> <p>Decommissioning: In the absence of detailed methodologies and schedules, decommissioning works and associated implications for commercial fisheries are considered analogous with those assessed for the construction phase.</p>

* Proposed Development Phase refers to construction (C), O&M (O) and decommissioning (D).

Impacts Scoped Out of the Assessment

13.7.4 No impacts have been scoped out of the commercial fisheries assessment.

13.8 Methodology for Assessment of Effects

Overview

13.8.1 The commercial fisheries assessment of effects has followed the methodology set out in Volume 1, Chapter 4: Environmental Impact Assessment Methodology. Specific to the commercial fisheries assessment, the guidance documents cited in Section 13.3 have been taken into account.

Criteria for Assessment

13.8.2 When determining the significance of effects, a process is used which involves defining the magnitude of the potential impacts and the sensitivity of the receptors. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity are based on those which are described in further detail in Volume 1, Chapter 4: Environmental Impact Assessment Methodology.

13.8.3 The criteria for defining magnitude in this chapter are outlined in Table 13.8. Each assessment considered the spatial extent, duration, frequency and reversibility of impact when determining magnitude which are outlined within the magnitude section of each impact assessment (e.g. a duration of hours or days would be considered for most receptors to be of short term duration, which is likely to result in a low magnitude of impact). In response to stakeholder feedback, example indicators have been provided in Table 13.8 to aid in the interpretation of each magnitude rating.

Table 13.8: Definition of Terms relating to Magnitude of Impact

Magnitude of Impact	Definition	Example indicators
High (Adverse)	Impact is expected to result in one or more of the following: <ul style="list-style-type: none"> Substantial loss of target fish or shellfish biological resource (e.g. loss of substantial proportion of resource within the Proposed Development); and Substantial loss of ability to carry on fishing activities (e.g. substantial proportion of effort within the Proposed Development). And/or: Impact is of long term duration (e.g. greater than 12 years duration) and/or is of extended physical extent.	<ul style="list-style-type: none"> Affected area represents core or critical fishing ground. High dependence confirmed through data and consultation. Long term or permanent reduction in fishing activity anticipated. No viable alternative grounds within normal fleet operating range.
High (Beneficial)	Impact is expected to result in one or more of the following:	N/A (not relevant to this assessment)

Magnitude of Impact	Definition	Example indicators
	<ul style="list-style-type: none"> • Large scale or major improvement of resource quality, measurable against biomass reference points; and • Extensive restoration or enhancement of habitats supporting commercial fisheries resources. 	
Medium (Adverse)	<p>Impact is expected to result in one or more of the following:</p> <ul style="list-style-type: none"> • Partial loss of target fish or shellfish biological resource (e.g. moderate loss of resource within the Proposed Development); and • Partial loss of ability to carry on fishing activities (e.g. moderate reduction of fishing effort within the Proposed Development). <p>And/or: Impact is of medium term duration (e.g. less than 12 years) and/or is of moderate physical extent.</p>	<ul style="list-style-type: none"> • Grounds contribute materially to seasonal or annual income. • Evidence of displacement pressures (e.g. competition, increased pressure on grounds, gear conflict). • Consultation indicates moderate reliance or operational challenge in adapting to impact presence.
Medium (Beneficial)	<p>Impact is expected to result in one or more of the following:</p> <ul style="list-style-type: none"> • Moderate improvement of resource quality; and • Moderate restoration or enhancement of habitats supporting commercial fisheries resources. 	N/A (not relevant to this assessment)
Low (Adverse)	<p>Impact is expected to result in one or more of the following:</p> <ul style="list-style-type: none"> • Minor loss of target fish or shellfish biological resource (e.g. minor loss of resource within the Proposed Development); and • Minor loss of ability to carry on fishing activities (e.g. minor reduction of fishing effort within the Proposed Development). <p>And/or: Impact is of short term duration (e.g. less than 2 years) and/or is of limited physical extent. The short term time period is based on professional judgement and is not definitive dependent on the nature of the impact.</p>	<ul style="list-style-type: none"> • Affected grounds contribute to a small portion of annual fishing activity. • Consultation indicates low economic or operational dependence. • Displacement or resource loss can be offset within normal fleet operating range.
Low (Beneficial)	<p>Impact is expected to result in one or more of the following:</p> <ul style="list-style-type: none"> • Minor benefit to or minor improvement of resource quality; and • Minor restoration or enhancement of habitats supporting commercial fisheries resources. 	N/A (not relevant to this assessment)

Magnitude of Impact	Definition	Example indicators
Negligible	Impact is expected to result in one or more of the following: <ul style="list-style-type: none"> • Slight loss of target fish or shellfish biological resource (e.g. slight loss of resource within the Proposed Development); and • Slight loss of ability to carry on fishing activities (e.g. slight loss of fishing effort within the Proposed Development). And/or: Impact is of very short term duration (e.g. less than one year) and/or physical extent of impact is negligible and broadly undetectable from pre-development baseline conditions.	<ul style="list-style-type: none"> • Very low or no fishing activity recorded. • Industry consultation confirms negligible operational reliance. • Any effect is short-lived and easily absorbed.

13.8.4 EIA regulations and guidelines recognise the importance of defining the duration of impacts, through terms like ‘long term’, ‘medium term’, and ‘short term’ and these durations can vary based on context and sector, such as in commercial fisheries. While there is no universally standardised definition of these terms, general guidelines can inform their appropriate use. For context, the EU EIA Directive (2011/92/EU) and related regulations focus more on assessing the significance of impacts rather than rigidly defining timeframes, but they emphasise the need for a comprehensive analysis of impacts over different temporal scales. Similarly, the International Energy Agency and UK EIA guidelines recommend considering the temporal relevance of impacts in relation to a project’s lifecycle.

13.8.5 In relation to commercial fisheries, the following timeframes are considered appropriate to the Proposed Development:

- Short term:
 - These are typically impacts that last for a relatively brief period, often in the range of one to two years.
 - Short term impacts generally refer to temporary changes that are expected to reverse quickly once the disturbance has ceased. This timeframe is consistent with the natural recovery cycles of many environmental systems.
- Medium term:
 - Medium term impacts are often those expected to last several years but not beyond ten to 12 years.
 - The recovery or restoration of affected systems might take this amount of time, especially when it comes to ecosystems or species that require longer periods to recover or regenerate.

- Long term:
 - Long term impacts typically extend beyond 12 years and could be permanent or only partially reversible within a tangible timescale (e.g. a human lifetime).
 - Long term impacts could involve major habitat changes, loss of biodiversity, or irreversible degradation of fisheries resources, which may take decades or longer to recover, if they recover at all.

13.8.6 The criteria for defining sensitivity in this chapter are outlined in Table 13.9. In response to stakeholder feedback, example indicators have been provided in Table 13.9 to aid in the interpretation of each sensitivity rating.

Table 13.9: Definition of Terms Relating to the Sensitivity of the Receptor

Sensitivity of the Receptor	Definition	Example indicators
Very High	Receptor is very highly vulnerable to impacts that may arise from the project and recoverability is long term or not possible. And/or: No alternative fishing grounds are available.	<ul style="list-style-type: none"> • Area represents only fishing ground. • Gear types/location highly specific with no feasible alternatives. • Full economic dependency on affected activity. • Permanent loss anticipated.
High	Receptor is highly vulnerable to impacts that may arise from the project and recoverability is long term or not possible. And/or: Low levels of alternative fishing grounds are available and/or fishing fleet has limited operational range.	<ul style="list-style-type: none"> • Area represents core or primary fishing ground. • Gear types/location highly specific with no feasible alternatives. • Economic dependency on affected activity. • Long term or permanent loss anticipated.
Medium	Receptor is somewhat vulnerable to impacts that may arise from the project and has moderate levels of recoverability. And/or: Moderate levels of alternative fishing grounds are available and/or fishing fleet has moderate operational range.	<ul style="list-style-type: none"> • Affected grounds contribute materially to seasonal income. • Some difficulty relocating effort without displacement or loss. • Limited spatial mobility or operational constraints (e.g. gear type, vessel size).
Low	Receptor is not generally vulnerable to impacts that may arise from the project and/or has high recoverability. And/or: High levels of alternative fishing grounds are available and/or fishing fleet has large to extensive operational range; fishing fleet is adaptive and resilient to change.	<ul style="list-style-type: none"> • Area represents a small portion of fleet activity. • Similar grounds are accessible within normal operational range. • Flexible gear use or target species.
Negligible	Receptor is not vulnerable to impacts that may arise from the	<ul style="list-style-type: none"> • No reliance on affected grounds.

Sensitivity of the Receptor	Definition	Example indicators
	project and/or has high recoverability. And/or: Extensive alternative fishing grounds available and/or fishing fleet is highly adaptive and resilient to change.	<ul style="list-style-type: none"> • Vessel(s) operate across multiple regions or grounds. • Impacts are spatially or temporally insignificant to operations.

13.8.7 Vulnerability is the susceptibility of a receptor to experience the impact of a change in baseline conditions:

- For example, very high vulnerability relates to a very high sensitivity: receptor cannot adapt, avoid or tolerate the impact.
- For example, very low vulnerability relates to a negligible sensitivity: receptor is highly likely to recover fully to levels not detectable against baseline.

13.8.8 Recoverability is a measure of how well a receptor recovers following exposure to an effect:

- For example, very low recoverability relates to a very high sensitivity: receptor does not have the ability to recover, or recovery is long term (e.g. greater than 12 years).
- For example, very high recoverability relates to a negligible sensitivity: receptor is highly likely to recover fully to levels not detectable against baseline.

13.8.9 The magnitude of the impact and the sensitivity of the receptor are combined when determining the significance of the effect upon each receptor (i.e. fishing fleet). The particular method employed for this assessment is presented in Table 13.10.

13.8.10 Where a range is suggested for the significance of effect, for example, minor to moderate, it is possible that this may span the significance threshold. The technical specialist’s professional judgement will be applied to determine which outcome defines the most likely effect, which takes in to account the sensitivity of the receptor and the magnitude of impact. Where professional judgement is applied to quantify final significance from a range, the assessment will set out the factors that result in the final assessment of significance. These factors may include the likelihood that an effect will occur, data certainty and relevant information about the wider environmental context.

13.8.11 The EIA Regulations require the identification and reporting of significant environmental effects. For the purposes of this assessment:

- a level of moderate or more will be considered a ‘significant’ effect in terms of the EIA Regulations; and
- a level of minor or less will be considered ‘not significant’ in terms of the EIA Regulations.

Table 13.10: Matrix Used for the Assessment of the Significance of the Effect

Sensitivity of Receptor	Magnitude of Impact			
	Negligible	Low	Medium	High
Negligible	Negligible	Negligible or Minor	Negligible or Minor	Minor
Low	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Medium	Negligible or Minor	Minor	Moderate	Moderate or Major
High	Minor	Minor or Moderate	Moderate or Major	Major
Very High	Minor	Moderate or Major	Major	Major

Table 13.11: Definition of Significance

Impact	Justification
Negligible	No effects or those that are beneath levels of perception, within normal bounds of variation, or within the margin of forecasting error.
Minor	These beneficial or adverse effects are generally, but not exclusively, raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the Proposed Development.
Moderate	These beneficial or adverse effects have the potential to be important and may influence the decision-making process. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse or beneficial effect on a particular resource or receptor.
Major	These beneficial or adverse effects are very important and are likely to be material in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national, or regional importance. However, a major change in a site or feature of local importance may also enter this category.

13.9 Embedded Mitigation

13.9.1 As part of the Proposed Development design process, a number of Embedded Measures have been proposed to reduce the potential for impacts on commercial fisheries (see Table 13.12). They are considered at every stage of the Proposed Development through design and best practice and, as there is a commitment to implementing these measures, these have been considered in the assessment presented in Section 13.10 (i.e. the determination of magnitude and therefore significance assumes implementation of these measures). These Embedded Measures are considered standard industry practice for this type of development.

- 13.9.2 Following the identification of the E3 POA as a preferred site, the Applicant undertook a further detailed assessment of E3 to inform the refinement of the spatial extent of Array Area and inform their ScotWind lease application (see Volume 1, Chapter 6: Site Selection and Consideration of Reasonable Alternatives). Although not listed as an Embedded Mitigation measure, minimising potential impacts to Commercial Fishing activity was a key consideration in the preferred Site Boundary for the Array Area and the resulting Option Lease Area (OLA).

Table 13.12: Embedded Measures Adopted as Part of the Proposed Development

Mitigation ID Number*	Embedded Mitigation Adopted as Part of the Proposed Development	Justification
1	Development of, and adherence to, a Cable Specification and Installation Plan (CSIP) post-consent.	This sets out measures to reduce adverse impacts to potentially sensitive receptors. It will also set out appropriate cable burial depth in accordance with industry good practice, reducing the risk of cable exposure.
2	Use of anti-corrosion protective coatings and Scour Protection where there is potential for scour to develop around the Offshore Infrastructure, and it is appropriate to do so.	Following the completion of a scour assessment, where there is the potential for scour to develop around Offshore Infrastructure, including Wind Turbines, OSP and cables, the appropriate Scour Protection will be put in place. Reducing the potential for changes to the morphology of the seabed due to scour.
3	Development of, and adherence to, a Piling Strategy. This will detail use of Acoustic Deterrent Devices (ADDs), slow start, soft start, and ramp up procedures, as appropriate, as well as any Additional Mitigation measures, where determined to be required, in consultation with stakeholders including NatureScot and Marine Directorate-Licensing Operations Team (MD-LOT).	Secured in the Section 36 Consent and Marine Licences, via the Piling Strategy.
4	Development of, and adherence to, a Cable Burial Risk Assessment (CBRA) and the Cable Burial Assessment (CBA). Implementation, management and monitoring of cable protection, via burial or external protection where adequate burial depth is not feasible, will be undertaken as informed by these assessments. Results of these assessments, and commitments to post construction monitoring, will be provided in the Cable Plan (CaP).	The potential impacts of cable installation can be mitigated through burying cables to a target cable burial depth, as detailed in the CBRA and CBA. This, alongside the cable installation strategy, should provide sufficient depth to avoid most exposure through metocean processes. details of any required cable protection will be included in the CaP.
5	Development of, and adherence to, an Environmental Management Plan (EMP), including a Marine Pollution Contingency Plan (MPCP) and a Biosecurity Plan with	Measures will be adopted to ensure that the potential for release of pollutants from construction, O&M and decommissioning plant is reduced so

Mitigation ID Number*	Embedded Mitigation Adopted as Part of the Proposed Development	Justification
	commitments to monitoring and actions to minimise Invasive Non-Native Species (INNS).	<p>far as reasonably practicable. These will likely include designated areas for refuelling where spillages can be easily contained, storage of chemicals in secure designated areas in line with appropriate regulations and guidelines, double skinning of pipes and takes containing hazardous substances, and storage of these substances in impenetrable bunds.</p> <p>Further detail on the mitigation of INNS is presented for its associated impact in Volume 2, Chapter 8: Benthic Ecology.</p>
7	Development of, and adherence to, a Construction Method Statement (CMS) along with a Code of Construction Practice (CoCP).	Construction procedures will follow the CMS and CoCP, with measures to control specific health and safety risks identified.
8	All relevant Health and Safety Executive (HSE) procedures will be followed.	As with the CMS, construction procedures will consider all relevant health and safety risks and follow HSE legislation and guidance to mitigate these potential identified risks.
9	Development of, and adherence to, a combined Navigational Safety and Vessel Management Plan (NSVMP), describing Project vessels' requirements, passages, monitoring and controls.	The NSVMP will set out measures to promote and ensure marine navigational safety, setting out approaches to the coordination of Proposed Development activity in the marine environment and promulgation of information to other marine users.
10	Development of, and adherence to, a Fisheries Mitigation, Monitoring and Communication Plan (FMMCP). The FMMCP includes details of the measures which are proposed to be implemented to reduce impacts on commercial fishing, the approach to monitoring fisheries activity and the approach to fisheries liaison and procedures to manage interactions between the Proposed Development and the fishing industry.	The FMMCP will set out the means of ongoing fisheries liaison and detail any mitigation to be put in place to limit effects on commercial fisheries activity. An FMMCP has been prepared to accompany the application and is provided in Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan.
11	Appointment of a Company Fisheries Liaison Officer (CFLO). The CFLO will support ongoing liaison and ensure clear communication between the Applicant and commercial fishers.	The FLO will establish and maintain effective communications between the Applicant, any contractors or sub-contractors, fishermen and other users of the sea and ensure compliance with best practice guidelines whilst doing so.
12	Advance warning and accurate location details of planned operations, associated Safety Zones and advisory	Advance notification of Proposed Development activity will be

Mitigation ID Number*	Embedded Mitigation Adopted as Part of the Proposed Development	Justification
	passing distances will be given via Notices to Mariners (NtMs) and Kingfisher Bulletins.	promulgated to other marine users to minimise disturbance to them.
13	Development of, and adherence to, a Lighting and Marking Plan (LMP). The LMP will confirm compliance with legal requirements with regards to shipping, navigation and aviation marking and lighting.	Decreases the risk of allision/contact with Offshore Infrastructure.
14	Adherence to best practice guidance with regards to fisheries liaison and procedures in the event of interactions between the Proposed Development and fishing activities (e.g. Fisheries Liaison with Offshore Wind and Wet Renewables group (FLOWW), 2025).	The Applicant will adhere to best practice guidance with regards to fisheries liaison and procedures in the event of interactions between the Proposed Development and fishing activities (e.g. FLOWW, 2025).
15	Participation in relevant commercial fisheries working group.	Participation in the East Region Commercial Fisheries Working Group (or any equivalent relevant commercial fisheries working group) to assist with liaison between the Proposed Development and the fishing community.
16	Application for, and use of, Safety Zones of up to 500 m during construction, major maintenance, and decommissioning phases. Advisory safe passing distances of up to 500 m will also be applied for mobile installation vessels.	Decreases the risk of allision with Offshore Infrastructure or collision with construction vessels.
17	Any objects dropped on the seabed during works associated with the Proposed Development will be reported in line with MD-LOT procedures and objects will be recovered where they pose a hazard to other marine users and where recovery is possible.	Decreases the risk of allision/contact and collision and of fishing gear snagging.
18	All vessels working on the Proposed Development will meet the required certification standards and carriage requirements, along with following international marine regulations.	Decreases the risk of allision/contact with Offshore Infrastructure or collision with vessels.
20	Suitable Aids to Navigation (AtoN) lighting and marking of the Proposed Development including construction buoyage and the use of a Cable Marker Board shall be implemented complying with International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Recommendations G1162 (IALA, 2021), to be finalised and approved in consultation with the	Decreases the risk of allision/contact with Offshore Infrastructure or collision with vessels.

Mitigation ID Number*	Embedded Mitigation Adopted as Part of the Proposed Development	Justification
	Maritime and Coastguard Agency (MCA) and Northern Lighthouse Board (NLB) through a LMP.	
22	Development of, and adherence to, an Emergency Response Cooperation Plan (ERCoP) in consultation with the Maritime & Coastguard Agency (MCA).	Decreases the risk of impact to Search and Rescue (SAR) capabilities; and risk of Wind Turbine breakout.
23	Development of, and adherence to, an Operation and Maintenance Programme (OMP) in conjunction with approved post-consent construction plans.	Decreases the risk of collision.
24	Development of, and adherence to, a Development Specification and Layout Plan (DSLPL). The development of the DSLP includes consultation with the relevant authorities for approval, including the MCA and NLB.	Decreases the risk of allision/contact with Offshore Infrastructure.
34	Drafting and implementation of a decommissioning programme, prepared in accordance with requirements of the Energy Act 2004, which will set out the extent of infrastructure to be removed as well as the methods and processes which will be used.	A Decommissioning Programme will be developed to cover the decommissioning phase as required under Chapter 3 of the Energy Act 2004. As the decommissioning phase will be a similar process to the construction phase but in reverse (i.e. increased project vessels on site, partially deconstructed structures) the mitigation measure will be similar to those for the construction phase.
40	Creation of a Waste Management Plan (WMP), which will describe the processes for handling and managing any waste materials.	The WMP will set out procedures to ensure all waste processing and handling activities with the potential to affect the environment are appropriately managed.
41	The Proposed Development will be marked on admiralty charts including an appropriate chart note.	Decreases the risk of allision/contact and collision and of fishing gear snagging.
42	Compliance of project vessels with international marine regulations as adopted by the Flag State, including International Regulations for Preventing Collisions at Sea (COLREGS) (IMO, 1972) and International Convention for the Safety of Life at Sea (SOLAS) (IMO, 1974).	Decreases the risk of allision with Offshore Infrastructure or collision with vessels.
48	Where boulder removal is required during site preparation, the location of large boulders that are relocated and may pose a snagging risk for fishing gear, will be disclosed to the fishing industry within a timely manner and in an accessible format.	Decreases the risk of allision/contact and collision and of fishing gear snagging.

Mitigation ID Number*	Embedded Mitigation Adopted as Part of the Proposed Development	Justification
49	Where appropriate, guard vessels will also be used to ensure adherence with Safety Zones or advisory passing distances to mitigate any impact which poses risk to surface navigation during construction, O&M and decommissioning phases. Such impacts may include partially installed structures or cables, extinguished navigation lights or other unmarked hazards.	Decreases the risk of allision/contact and collision and of fishing gear snagging.
50	MGN 654 Annex 4 (MCA, 2021) requires that hydrographic surveys will fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the MCA Hydrography Manager and the United Kingdom Hydrographic Office (UKHO).	Decreases the risk of allision/contact and collision and of fishing gear snagging.
54	Development of, and adherence to, a Project Environmental Monitoring Plan (PEMP) to include details of any agreed surveys or monitoring requirements. The PEMP will provide the mechanism to validate the impact assessment, assess the effectiveness of mitigation measures, and inform adaptation of mitigation measures throughout the construction and O&M phases of the Proposed Development.	The PEMP will detail the methodology that will be used validate the impact assessment predictions made within the EIA.
55	The Applicant will enter into Disruption Agreements, where appropriate, to mitigate justifiable disturbance to fishing activity experienced through temporary loss of access due to offshore works associated with the Proposed Development. Agreements will be evidence-based and implemented where demonstrable disruption to fishing activity occurs.	Mitigates justifiable disturbance to fishing activity experienced through temporary loss of access due to construction activities within the Export Cable Corridor. See text beneath this table for detail.

*see Volume 3, Technical Appendix 4.6: Schedule of Mitigation and Commitments

Disruption Agreements

- 13.9.3 The Applicant is committed to mitigating justifiable disturbance experienced by fishers through loss of access due to construction activities.
- 13.9.4 The Applicant will enter commercial Disruption Agreements with fishers in relation to the Export Cable Corridor where there is evidenced temporary disruption during the construction phase (which is inclusive of pre-construction surveys). The current scope reflects the outcomes of the impact assessment,

which identified that fishing activity is relatively more concentrated within the Export Cable Corridor and that temporary access restrictions are most likely to arise during cable installation works. On the basis of the current evidence base, Disruption Agreements are expected to apply to the potting and scallop dredge fisheries, which demonstrate the clearest spatial interaction with sections of the Export Cable Corridor. The applicability of Disruption Agreements to specific fleets takes into account the degree of spatial interaction with construction activities within the Export Cable Corridor and the operational characteristics of the fishery. For fisheries with more limited interaction with the Export Cable Corridor and greater operational flexibility to redistribute effort within their normal fishing range, Disruption Agreements are not considered necessary. Fishing activity patterns may evolve over time and the implementation of Disruption Agreements will therefore remain responsive to evidence of construction phase disruption where this can be demonstrated.

- 13.9.5 Evidence-based Disruption Agreements with fishers shall only be implemented as a last resort where residual impacts persist despite the application of all other reasonable Embedded Mitigation measures.
- 13.9.6 Disruption Agreements will adhere to the well-established principles as per existing good practice guidance and existing Developer procedures. Disruption Agreements (referred to as Disruption Settlements in FLOWW 2025 guidance) shall include protocols for how the parties (i.e. the Applicant and the affected fisher) will act during the construction period and, where supported by an appropriate evidence base, a mechanism for payments designed to ensure that affected fishers are neither worse nor better off as a result of Proposed Development activities.
- 13.9.7 Disruption Agreement payments will only be established based on justifiable claims to achieve a position whereby fishing interests are neither advantaged nor disadvantaged. Affected fishermen will be required to provide evidence to corroborate any disruption claims. Payments will be considered for justifiable claims submitted by individuals only, ensuring that those who are impacted will receive fair payment in line with potential financial losses; the Applicant will not consider association agreements.
- 13.9.8 This Applicant's commitment to Disruption Agreements is considered as Embedded Mitigation. Disruption Agreements are broadly acknowledged to be an appropriate and pragmatic mechanism (and have been widely applied as recognised offshore wind industry good practice) for mitigating short term and temporary loss of access impacts.
- 13.9.9 Further detail on Disruption Agreement procedures is set out in Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan.

13.10 Assessment of Significance

- 13.10.1 Table 13.7 summarises the potential effects arising from the construction, O&M and decommissioning phases of the Proposed Development, as well as the MDS against which each impact has been assessed. An assessment of the likely significance of the effects of the Proposed Development on the commercial fisheries receptors caused by each identified impact is given below.

IMPACT 1 - REDUCTION IN ACCESS TO, OR EXCLUSION FROM, ESTABLISHED FISHING GROUNDS WITHIN THE ARRAY AREA

- 13.10.2 This impact relates to the reduction in access to, or exclusion from, established fishing grounds within the Proposed Development due to construction, O&M and decommissioning activities related to Wind Turbines, OSPs, their foundations, and the installation of inter-array and interconnector cables.

Construction Phase

- 13.10.3 During the construction phase, this impact relates to the temporary loss or temporary restricted access to fishing grounds due to construction activities related to the installation of Wind Turbines, OSPs, their foundations, and the installation of IAC and interconnector cables.
- 13.10.4 During the construction phase this impact is considered temporary because it is only applicable throughout the duration of the construction phase. Long term loss of access is considered for the O&M phase below.

Magnitude of Impact

- 13.10.5 During construction in the Array Area, commercial fisheries will be prevented from fishing where construction activities are taking place, plus 500 m Safety Zones around structures where active construction works are ongoing, and otherwise 50 m Safety Zones around partially complete structures or complete structures yet to be operational. In addition, it is assumed that up to 500 m rolling safety zone for mobile installation vessels will be in place. The total construction duration for the Proposed Development is anticipated to be five years, with construction activities occurring anywhere within the Array Area at any given time and a number/range of construction activities being undertaken simultaneously.
- 13.10.6 A buoyed construction area will be implemented around construction activities and with an anticipated single phase of construction, it is feasible that this buoyed construction area could surround the entirety of the Array Area throughout the anticipated five-year period. Given that construction activities and project infrastructure could be located anywhere within the Array Area at any given time, it is assumed that fishing is not likely to resume within the Array Area until completion of construction. This is a conservative and precautionary assumption in the absence of detailed construction scheduling being known.
- 13.10.7 This impact will lead to loss of access to fishing grounds and access to the fish and shellfish resources within these grounds for a range of fishing opportunities during the construction phase, which will directly affect fleets over a medium term duration (i.e. greater than two years and less than 12 years). The impact is predicted to be continuous throughout the construction phase.
- 13.10.8 The impact is of relevance to national and international fishing fleets and is described below on a fishery-by-fishery basis.
- 13.10.9 Potting fishery: The potting fleet targets lobster and crab across a wide area, from inshore grounds, extending out towards and beyond the 12 nm limit. The potting fleet does not operate routinely across the Array Area as evidenced by VMS data and supported by landings statistics. The limitations of VMS data, in

that they are not representative of vessels under 15 m in length is noted and therefore the assessment draws upon landing statistics, NMPi mapping of the activity of under 12 m length vessels, surveillance data, and Company FLO and stakeholder feedback as more robust and representative data sources of potting activity. CFLO and fisheries stakeholder feedback has suggested that potting activity has been extending further offshore in recent years, though this trend is yet to be evidenced in publicly available data sources.

- 13.10.10 The impact is predicted to be of local spatial extent, temporary with a medium term duration, and medium reversibility. It is predicted that the impact will affect the receptor directly. The magnitude of impact is therefore considered to be low adverse for the potting fleet.
- 13.10.11 Scallop dredge fishery: This fishery is operated across broadscale gravelly, sand-gravel and sandy habitats. Scallop grounds are targeted by UK vessels throughout the UK, with vessels naturally rotating grounds based on productivity in a five to seven year cycle. The scallop dredge fleet does not operate intensively across the Array Area, as evidenced by VMS and surveillance data, and by SFF-provided vessel plotter data, the latter indicating that there is expected to be occasional scallop dredge activity along the northern boundary and within the north-eastern corner of the Array Area. Key scallop dredge grounds that run parallel to the east coast of Scotland are well established and do not overlap, but fringe, the Array Area to the south-west and north-east.
- 13.10.12 The impact is predicted to be of local spatial extent, temporary with a medium term duration, and medium reversibility. It is predicted that the impact will affect the receptor directly. Reflecting that whilst there is scope for some scallop dredge activity within the Array Area, the level of effort and associated landings values are low in the context of the Local Commercial Fisheries Study Area, the magnitude of impact is therefore considered to be low adverse for the scallop dredge fleet.
- 13.10.13 Demersal otter trawl fishery: The demersal otter trawl fleet does not operate routinely across the Array Area, as evidenced by VMS and surveillance data, and by SFF-provided vessel plotter data.
- 13.10.14 Landings statistics indicate notable increases in the value of haddock landed by this fishery from the Local Commercial Fisheries Study Area across 2022 and 2023. Feedback from industry consultation has indicated that fishing grounds within the region have historically been targeted for a smaller size class of haddock. In the period 2010 to 2013/14, fishing grounds within the Local Commercial Fisheries Study Area were understood to support this small size class of haddock. The subsequent decline of this fishery may be related to a number of possible factors, including the Landing Obligation (MMO, 2015) legislation implemented in 2016 and 2017 for haddock in the North Sea, together with changes in processing capabilities and availability of EU labour to process 'small' haddock post EU-exit. It is understood that new seafood processing facilities established on the north-east coast of Scotland are able to support

the automated processing of smaller whitefish³, which may be a driver for the increase in haddock landings values across 2022 and 2023. Multiple spatial datasets, including some which capture the period 2012/2013/2014, do not indicate that historically key demersal trawl fishing grounds overlapped the Array Area.

- 13.10.15 The impact is predicted to be of local spatial extent, temporary with a medium term duration, and medium reversibility. It is predicted that the impact will affect the receptor directly. Based on the current baseline assessment, the magnitude of impact is therefore considered to be low adverse for the demersal otter trawl fleet.
- 13.10.16 Demersal seine fishery: Demersal seine activity and trends are broadly aligned with those described above for the demersal otter trawl fishery targeting haddock/whitefish, with spatial data not indicating any overlap of activity with the Array Area. On that basis, the impact is predicted to be of local spatial extent, medium term duration and medium reversibility. It is predicted that the impact will affect the receptor directly. Based on the current baseline assessment, the magnitude of impact is therefore considered to be low adverse for the demersal seine fleet.
- 13.10.17 Pelagic trawl fishery: Landing statistics indicate that pelagic species (notably herring) are occasionally caught by UK and non-UK fishing fleets within the Regional and Local Commercial Fisheries Study Areas. Pelagic trawling vessels are typically large (typically > 25 m in length), targeting highly mobile species (herring or mackerel) that consistently move/shoal during spawning migrations. Highly mobile pelagic species, which move in shoals and are not associated with specific seabed habitats, are assumed to be available to catch across large areas.
- 13.10.18 All available evidence, including VMS, surveillance data, landings statistics and industry consultation indicate that very limited landings are taken by pelagic vessels from within the Local Commercial Fisheries Study Area and these datasets indicate no pelagic trawl activity in the Array Area.
- 13.10.19 The impact is predicted to be of local spatial extent, temporary with a medium term duration, and medium reversibility. It is predicted that the impact will affect the receptor directly. The magnitude of impact is therefore considered to be negligible adverse for the UK and non-UK pelagic trawl fleets.
- 13.10.20 Handline fishery: Data does not indicate the presence of any jigging activity overlapping the Array Area. The impact is predicted to be of local spatial extent, temporary with a medium term duration, and medium reversibility. It is predicted that the impact will affect the receptor directly. The magnitude of impact is therefore considered to be negligible adverse for the handline fleet.

³ <https://fishingnews.co.uk/news/new-processing-venture-for-small-msc-haddock/>

Sensitivity of the Receptor

- 13.10.21 The demersal otter trawl, demersal seine, scallop dredge, potting and handline fleets specifically target the Local Commercial Fisheries Study Area from local ports (approximately 90% of the landed value from the Local Commercial Fisheries Study Area is landed into local ports), notably Arbroath, Peterhead and Montrose. While these fishing fleets may have access to alternative fishing grounds outside the Local Commercial Fisheries Study Area, they are expected to have a higher dependence on local grounds due to fuel cost, operating distances and weather constraints. The demersal otter trawl, demersal seine, scallop dredge, potting and handline fishing fleets are considered to have moderate levels of alternative fishing grounds; the classification of ‘moderate’ alternative grounds reflects that while options exist beyond the Local Commercial Fisheries Study Area, these are not fully equivalent in terms of proximity, operational efficiency or catch value for all vessels. These fishing fleets are deemed to be of medium vulnerability, medium recoverability and medium value. The sensitivity of these receptors is therefore, considered to be medium.
- 13.10.22 The pelagic mobile fleet actively targets a wide range of grounds on a seasonal basis and is not specifically focused across the Proposed Development. All pelagic gear fleets are considered to have an extensive operational range, be highly adaptive and resilient to change. The sensitivity of these receptors is therefore considered to be low.

Significance of the Effect

- 13.10.23 Potting fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.24 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.25 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.26 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.27 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any pelagic trawl activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.

- 13.10.28 Handline fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any handline activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.29 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

O&M Phase

- 13.10.30 During the O&M phase, the assessment assumes that within the Proposed Development, commercial fisheries will be prevented from actively fishing within an area of 0.27 km² (for Wind Turbines) and 0.015 km² (for OSPs) due to the physical presence of infrastructure and Scour Protection, including up to 67 Wind Turbines and up to three OSPs; plus across areas of IAC and interconnector cable protection. Minimum turbine spacing is 1,038 m between Wind Turbines. In addition, during the lifetime of the Proposed Development, major maintenance may be undertaken, including component replacement and remedial cable burial, and as such there may be some temporary displacement of fishing activities within associated 500 m maintenance Safety Zones and advisory safety distances around maintenance vessels. The assessment assumes that fishing will otherwise be possible within the Proposed Development where Wind Turbine spacing and layout allow productive grounds to be targeted.

- 13.10.31 The individual decisions made by the skippers of fishing vessels with their own perception of risk will determine the likelihood of whether their fishing will resume within the Proposed Development. Inclement weather will be a significant contributor to this risk perception. The type and dimension of fishing gear also influences the potential opportunities within the Proposed Development Boundary. For example, pelagic trawl, multi-rig otter trawl and demersal seine/fly shooting gear require a greater distance for safe operation and these gears are unlikely to target grounds in the vicinity of infrastructure. This is considered when assessing impact magnitude.

Magnitude of Impact

- 13.10.32 This impact will lead to highly localised loss of access to fishing grounds, which will directly affect fleets over a long term duration, noting an operational lifetime of approximately 30 years. The impact is predicted to be continuous with low reversibility for the lifetime of the Proposed Development and is of relevance to national and international fishing fleets.
- 13.10.33 As described for the construction phase, there is limited evidence of activity within/immediately proximate to the Array Area for demersal otter trawl, demersal seine and potting fisheries, and therefore the magnitude is assessed as low adverse for these fisheries. There is no evidence of activity within/immediately proximate to the Array Area for pelagic trawl and handline fisheries and the magnitude is assessed as negligible adverse.

- 13.10.34 Low levels of activity are noted for the scallop dredge fishery. It is anticipated that fishing activity may resume within parts of the operational wind farm where turbine spacing and layout allow safe operation, noting that individual vessel operators will determine whether grounds are targeted, and therefore the magnitude of impact is assessed as low adverse for the scallop dredge fishery.

Sensitivity of the Receptor

- 13.10.35 The sensitivity of the Commercial Fishing receptors is the same or similar to that assessed during the construction phase and summarised as low for pelagic trawl fisheries, and medium for scallop dredge, demersal otter trawl, demersal seine, potting and handline.

Significance of the Effect

- 13.10.36 Potting fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.37 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.38 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.39 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.40 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any pelagic trawl activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.
- 13.10.41 Handline fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any handline activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.42 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

Decommissioning Phase

- 13.10.43 During the decommissioning phase, this impact relates to the temporary loss or temporary restricted access to fishing grounds due to decommissioning activities related to the removal of Wind Turbines, OSPs, their foundations, and inter-array and interconnector cables.
- 13.10.44 It is acknowledged that there is potential for some infrastructure, such as cable protection, to remain *in situ* at decommissioning, subject to the approved Decommissioning Programme. For the purposes of this assessment, the long term presence of infrastructure on the seabed has been considered under the operational phase impacts. The decommissioning assessment therefore focuses on temporary disturbance associated with removal activities.

Magnitude of Impact

- 13.10.45 In the absence of a finalised Decommissioning Programme (which will be subject to separate approval and further assessment where required), the decommissioning phase has been assessed based on the realistic worst case assumption that activities will be broadly comparable to those undertaken during construction. The effects of decommissioning activities are therefore expected to be the same as, or no greater than, those identified for construction. The decommissioning sequence will generally be the reverse of the construction sequence and involve similar types and numbers of vessels and equipment. For assessment purposes, it is assumed that the decommissioning phase could occur over a similar duration to construction (i.e. up to five years).
- 13.10.46 The magnitude of impact is the same or similar to that assessed during construction. The impact is predicted to be of local spatial extent, medium term duration, intermittent and medium reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore considered to be negligible for the handline and pelagic trawl fleets and low for all other fisheries.

Sensitivity of the Receptor

- 13.10.47 The sensitivity of the Commercial Fishing receptors is the same or similar to that assessed during the construction phase and summarised as low for the pelagic trawl fishery, and medium for all other fisheries

Significance of the Effect

- 13.10.48 Potting fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.49 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

- 13.10.50 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.51 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.52 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any pelagic trawl activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.
- 13.10.53 Handline fishery: Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any handline activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.54 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

IMPACT 2 - REDUCTION IN ACCESS TO, OR EXCLUSION FROM ESTABLISHED FISHING GROUNDS WITHIN THE EXPORT CABLE CORRIDOR

Construction Phase

- 13.10.55 Fishing activity will be locally and temporarily excluded at the location of construction of the up to three export cables owing to the presence of construction vessels, construction operations and the need to observe The Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREGS) (International Maritime Organization (IMO), 1974).
- 13.10.56 The construction scenario assumes a construction period of approximately five years in a single phase with Offshore Export Cable installation taking place across one of those years, preceded by pre-construction activity including survey and seabed preparation.
- 13.10.57 In terms of the area impacted by construction activities, in total up to 210 km of export cabling will be installed. In addition, an advisory safe passing distance of 500 m radius around cable installation vessels active along the Export Cable Corridor is recommended (i.e. a rolling 0.79 km² area along the 70 km Export Cable Corridor length).
- 13.10.58 In addition, up to 50% of the length of the export cables may require cable protection including: rock placement, rock bags, grout bags or concrete mattresses.

Magnitude of Impact

- 13.10.59 The Export Cable Corridor overlaps with ICES rectangles 42E7 and 42E8; it is fished by several fishing fleets, as discussed below.
- 13.10.60 Potting fishery: Scottish Government inshore mapping of the value of catch by under 12 m length vessels illustrate moderate to high values across the nearshore Export Cable Corridor with most potting activity occurring within 3 nm of the shore (see Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report). The North and East Coast Regional Inshore Fishery Group (N&EC RIFG) mapping corroborates this, and it indicates that whilst potting activity is present in the Export Cable Corridor, locations to the north and south of the Export Cable Corridor are relatively more important potting grounds supporting higher levels of fishing activity.
- 13.10.61 Fishing vessel businesses that deploy potting gear will be required to relocate gear from areas under construction. This impact will be intermittent, short term and temporary in nature. The Applicant's commitment to mitigating justifiable disturbance experienced through temporary loss of access due to construction activities through Disruption Agreements (see Section 13.9 for detail) is relevant in this scenario. The application of this measure results in a magnitude of impact assessed to be low adverse.
- 13.10.62 Scallop dredge fishery: VMS data mapped in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report shows consistently targeted scallop dredge grounds overlapping discrete sections of the Export Cable Corridor. Grounds are targeted from the 3 nm limit seawards and most intensely around the 6 nm limit, though activity is also present beyond the 12 nm limit. This pattern of activity is further validated by fishing vessel plotter data supplied confidentially to the Applicant by industry representatives, which shows repeated targeting of discrete grounds. On average, £730,000 value is landed by the UK scallop dredge fleet from ICES rectangles 42E7 and 42E8 annually based on the 2019 to 2023 period (£1.3 million annual average across 2010 to 2023).
- 13.10.63 Export cable construction activities could potentially impact duration or length of fishing vessel scallop dredge tows and scallop dredgers will not be able to access areas of the Export Cable Corridor that are under construction, and areas where cable protection prohibits practicable deployment of scallop dredge gear. Scallop dredge gear penetrates the sediment by up to 20 cm to 30 cm and therefore areas of cable protection are likely to be avoided by scallop dredge vessels.
- 13.10.64 As described in Table 13.7, up to 50% of the Offshore Export Cables may require cable protection along a corridor length of 70 km. In addition, it is noted that Marine Guidance Notice (MGN) 661 (MCA, 2021) advises that mobile fishing vessels with penetrative gear avoid submarine cables, and while cables are typically buried or protected to allow trawling, the active penetration of scallop dredge gear into the sediment makes MGN 661 more pertinent to this gear type, especially in areas where target burial depth is not achieved.

- 13.10.65 There is evidence of overlap of the Export Cable Corridor with important scallop grounds, though it is noted that scallop dredging activity typically occurs separately from potting, as these gear types are not generally deployed within the same grounds at the same time due to the risk of gear conflict. Scallop dredge vessels targeting grounds in the Export Cable Corridor may be required to avoid areas of construction. The Applicant's commitment to mitigating justifiable disturbance experienced through temporary loss of access due to construction activities through Disruption Agreements (see Section 13.9 for detail) is relevant in this scenario and thus the magnitude of impact is assessed as low adverse.
- 13.10.66 Demersal otter trawl fishery: VMS data mapped in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report shows demersal trawl overlapping discrete sections of the Export Cable Corridor. Grounds are targeted inside of the 6 nm limit. On average, £407,000 value is landed by the demersal otter trawl fleet from ICES rectangles 42E7 and 42E8 annually based on the 2019 to 2023. Over 75% of this value is associated with landings of Nephrops, and 17% with landings of squid, with Nephrops landing values increasing across 2019 to 2023 (£500,000 in 2023), and squid landings values declining (£13,000 in 2023). Approximately 67% of landings by value across 2019 to 2023 were made by vessels of under 15 m length operating out of local ports, Arbroath, Methil and Leven, and Montrose, fishing their local grounds.
- 13.10.67 There is evidence of overlap of the Export Cable Corridor with inshore Nephrops grounds. However, feedback from the CFLO indicates that potting represents the primary fishery within sections of the Export Cable Corridor, which limits the extent of mobile gear activity due to the incompatibility of static and mobile gear types. Data also indicates a more occasional presence of trawlers targeting squid. Demersal trawl vessels targeting these grounds may be required to avoid localised areas of construction activity within sections of the Export Cable Corridor. However, the spatial overlap with the Export Cable Corridor is limited and demersal trawl vessels are able to redistribute effort within their normal operational range with limited operational change. On this basis the magnitude of impact is assessed as low adverse.
- 13.10.68 Demersal seine fishery: Spatial data does not indicate any overlap of activity with the Export Cable Corridor and the magnitude of impact is therefore considered to be negligible adverse for the demersal seine fleet.
- 13.10.69 Pelagic trawl fishery: Spatial data does not indicate any overlap of activity with the Export Cable Corridor and the magnitude of impact is therefore considered to be negligible adverse for the pelagic trawl fleet.
- 13.10.70 Handline fishery: The N&EC RIFG mapping of handline fishery activity indicates the fishery occurs within the 12 nm limit, with effort focused from 0-3 nm. Specific high 'fishery occurrence' areas are noted outside the Export Cable Corridor, to the south towards Arbroath, where the majority of landings by this fishery are made. Landings from ICES rectangles 42E7 and 42E8 equate to £10,000 value annually (based on 5-years from 2019 to 2023). Based on the high mobility of the target species and high areas of activity identified outside the

Export Cable Corridor, the magnitude of impact for the jigging fishery is assessed as low adverse.

Sensitivity of the Receptor

- 13.10.71 The demersal otter trawl, demersal seine, scallop dredge, potting and handline fleets are considered to have moderate levels of alternative fishing grounds; are deemed to be of medium vulnerability and medium recoverability. The sensitivity of these receptors is therefore, considered to be medium.
- 13.10.72 The pelagic trawl fleet actively targets a wide range of grounds on a seasonal basis, and their activity is not focused across the Export Cable Corridor. All pelagic gear fleets are considered to have an extensive operational range, be highly adaptive and resilient to change. The sensitivity of these receptors is therefore, considered to be low.

Significance of the Effect

- 13.10.73 Potting fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.74 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.75 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.76 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be medium. Given the absence of evidence of demersal seine activity in the Export Cable Corridor, **Negligible** adverse significance is concluded, which is not significant in EIA terms.
- 13.10.77 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any pelagic trawl activity in the Export Cable Corridor, **Negligible** adverse significance is concluded, which is not significant in EIA terms.
- 13.10.78 Handline fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.79 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

O&M Phase

- 13.10.80 The assessment assumes that commercial fisheries will be prevented from actively fishing in areas of cable protection and cable crossings, and temporarily in the location of any O&M activity. ESCA (2018) notes that cables are potentially subsea hazards, and that while great effort is made to bury and protect them, mariners should never assume that cables are completely buried. Furthermore, the Mariners Handbook advises that: every care should be taken to avoid anchoring, trawling, fishing, dredging, drilling or carrying out any other activity in the vicinity of cables which might damage them (UK Hydrographic Office, 2004). In addition, the MCA guidance MGN 661 (MCA, 2021), advises that fishing vessels should avoid fishing activity near either side of submarine cables in order to minimise the risk of damage as much as possible.
- 13.10.81 Notwithstanding this, subsea cables are widespread throughout the North Sea, providing power and telecommunications links, and it is understood that fishing does take place in the vicinity of subsea cables (Kingfisher Information Service - Offshore Renewable & Cable Awareness, 2019).
- 13.10.82 The assessment is undertaken on the understanding that it is illegal to wilfully, or negligently, break or damage any submarine cable and that burial, or other forms of protection, and routine burial surveys or other activities undertaken by the cable owner do not indemnify other seabed users should their activities result in damage to it.
- 13.10.83 For the purposes of this assessment, it is also assumed that as a result of Embedded Mitigation measures (see Section 13.9) fishers will be well informed of the location and integrity of the Offshore Export Cables (locations of protection, details of routine cable integrity surveys and location and schedule for any maintenance works), and that based on this knowledge will seek to exploit grounds across the Export Cable Corridor with caution. The assessment therefore assumes that fishing will resume within the vicinity of the Offshore Export Cables, and that fishers will comply with MGN 661 (MCA, 2021).
- 13.10.84 NtMs will be issued in advance of any maintenance works. Potting vessels may be required to temporarily relocate pots during maintenance works, although such works are likely to be infrequent.

Magnitude of Impact

- 13.10.85 Gear targeting pelagic species does not normally come into contact with the seabed and therefore the presence of the Offshore Export Cables will not affect potential fishing opportunities for handline or pelagic trawl fishing fleets, noting the latter is unlikely to be active across the Export Cable Corridor. Given that fishing is likely to resume across the majority of the Export Cable Corridor with exception of in areas of cable protection, the magnitude of impact is considered to be negligible adverse for the pelagic and handline fishing fleets, negligible adverse for the demersal seine fleet due to lack of activity across the Export Cable Corridor, and low adverse for all other fishing fleets.

Sensitivity of the Receptor

- 13.10.86 The sensitivity is as described for construction, summarised as medium for demersal otter trawl, demersal seine, scallop dredge, potting and handline fleets; and low for the pelagic trawl fleet.

Significance of the Effect

- 13.10.87 Potting fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.88 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.89 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.90 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be medium. Given the absence of evidence of demersal seine activity in the Export Cable Corridor, **Negligible** adverse significance is concluded, which is not significant in EIA terms.
- 13.10.91 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting the absence of evidence of notable pelagic trawl activity within the Export Cable Corridor, and that pelagic trawl gear operates in the water column and does not interact with the seabed, and vessels are able to operate over subsea cables once installed, **Negligible** adverse significance is concluded, which is not significant in EIA terms.
- 13.10.92 Handline fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of negligible or minor adverse significance. Export cables will be buried and charted, and no routine exclusion zones are anticipated during normal operation. Handline fishing does not involve seabed contact and vessels are able to operate over subsea cables, with only very short term and localised restrictions possible during occasional maintenance activities. **Negligible** adverse significance is concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.93 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

Decommissioning Phase

Significance of the Effect

- 13.10.94 In the absence of a finalised Decommissioning Programme (which will be subject to separate approval and further assessment where required), the decommissioning phase has been assessed on the basis of a realistic worst case assumption that activities will be broadly comparable to those undertaken during construction. The effects of decommissioning activities are therefore expected to be the same as, or no greater than, those identified for construction, as summarised below. The decommissioning sequence will generally be the reverse of the construction sequence and involve similar types and numbers of vessels and equipment. For assessment purposes, it is assumed that the decommissioning phase could occur over a similar duration to construction (i.e. up to five years).
- 13.10.95 It is acknowledged that there is potential for some infrastructure, such as cable protection, to remain *in situ* at decommissioning, subject to the approved Decommissioning Programme. For the purposes of this assessment, the long term presence of infrastructure on the seabed has been considered under the operational phase impacts. The decommissioning assessment therefore focuses on temporary disturbance associated with removal activities.
- 13.10.96 Potting fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The low magnitude rating reflects the Applicant commitment to Disruption Agreements where temporary disruption during decommissioning activities can be evidenced. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.97 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The low magnitude rating reflects the Applicant commitment to Disruption Agreements where temporary disruption during decommissioning activities can be demonstrated. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.98 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.99 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Negligible** adverse significance, which is not significant in EIA terms.
- 13.10.100 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any pelagic trawl activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.

- 13.10.101 Handline fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.102 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

IMPACT 3 - DISPLACEMENT LEADING TO GEAR CONFLICT AND INCREASED FISHING PRESSURE ON ADJACENT GROUNDS

- 13.10.103 Loss of access or exclusion from fishing grounds due to the Proposed Development may lead to increases in fishing effort in other areas that may already be exploited thereby leading to increased pressure and gear conflict.
- 13.10.104 Where Disruption Agreements (see Section 13.9) apply to Export Cable Corridor construction activities, these arrangements reduce the potential for displacement-related effects such as gear conflict or increased fishing pressure on adjacent grounds, as affected fishers are compensated for temporary disruption rather than needing to relocate effort to alternative fishing grounds.
- 13.10.105 This assessment of displacement has been undertaken with due regard to Xodus guidelines in defining the magnitude of impact to each receptor group and sensitivity of each Commercial Fishing fleet. The displacement considers both primary and secondary displacement, defined as follows (Scottish Government, 2022a):
- Primary displacement refers to the first instance of displacement where fishing effort is relocated to another area as a result of a change in the spatial environment. This corresponds to displacement that is a direct result of other licensed marine activities and associated infrastructure.
 - Secondary displacement is an indirect effect of the other licensed marine activity and associated infrastructure. This occurs when the fishing effort that is relocated through primary displacement also displaces other fishing effort.
- 13.10.106 The guidance provides details on baseline data sources, highlighting that no single source of data can be used to comprehensively describe Commercial Fishing activity, due to the inherent limitations of each data source. Data sources are detailed in Table 13.5, together with associated limitations and uncertainties. The guidance specifically recommends the following steps (Scottish Government, 2022a):
- clear understanding of the Commercial Fishing ‘receptors’ for which impacts will be assessed, the fishing methods which are operated in the Local and Regional Commercial Fisheries Study Areas, including the areas where fishing activity may be relocated;
 - identification of the likely maximum distance of displacement by the receptors, and the potential spatial extent of displacement effects for the fishing vessels which are already operational in the area which vessels are displaced to;

- identification of potential impacts on displaced commercial fisheries from the area that vessels are initially displaced from;
- identification of potential impacts on any fishing vessel operators/owners which are already active in the area in which vessels are displaced to and the potential for competition for space;
- establishing the sensitivity of each commercial fisheries receptor to displacement, with reference to the specifications;
- if possible, a quantitative assessment of magnitude (e.g. taking account of spatial extent, duration, fishing effort, number of vessels); and
- consideration of primary and secondary displacement where applicable.

Construction Phase

Magnitude of Impact

- 13.10.107 Conflict over diminished grounds may occur if displaced vessels explore grounds traditionally fished by other gear types; and/or displaced vessels relocate to actively fished grounds already targeted by the same gear. For example, this could include displaced demersal otter trawlers exploring areas fished by potters and thereby causing gear conflict or gear entanglement between potting lines and trawl gear and/or displaced demersal otter trawlers focusing effort in areas already fished by demersal otter trawlers and therefore increasing competition in that area. The impact is predicted to be of regional spatial extent, medium term duration and continuous.
- 13.10.108 Potting fishery: Conflict over diminished grounds may occur if displaced vessels operating mobile gear (e.g. scallop dredge or demersal trawl) explore grounds traditionally fished by potters; and/or displaced potting gear is relocated into other actively fished potting grounds. Displacement of mobile gear may therefore increase the risk of interaction with potting gear.
- 13.10.109 When considering the impact of potters being displaced into grounds already targeted by potters two scenarios are feasible:
- alternative fishing grounds are available to relocate gear, in which case gear conflict and displacement effects will be low; or
 - alternative fishing grounds are not available as adjacent areas are already being fished by potters, in which case the gear already on the ground limits the level of displacement. While there remains potential for gear conflicts and increased fishing pressure to arise, appropriately mitigated exclusion impacts will limit this.
- 13.10.110 The Applicant's commitment to mitigating justifiable disturbance experienced through temporary loss of access due to Export Cable Corridor construction activities through Disruption Agreements (see Section 13.9 for detail) is relevant in this scenario. The application of this Embedded Mitigation measure reduces the potential for displacement of potting activity into adjacent grounds and therefore results in a magnitude of impact assessed to be low adverse.

- 13.10.111 Scallop dredge fishery: Vessels in this fleet typically have an operational range throughout the Regional Commercial Fisheries Study Area and throughout waters around the UK. This fleet targets a range of alternative grounds, including in the Local Commercial Fisheries Study Area, which due to its proximity to key fishing ports is considered an important fishing location. Given the higher dependence of local vessels on this Local Commercial Fisheries Study Area (based on high proportion of landings into local ports), these vessels could be expected to remain within the Regional Commercial Fisheries Study Area, so proportionally experience a higher degree of displacement. The value of the fisheries has been described within the reduction of access impacts. It is considered that a proportion of this value will be redirected to alternative fishing grounds that have been routinely fished by the displaced operators, with the remainder focused on alternative fishing grounds not routinely fished. The former can cause increased pressure on alternative grounds, and the latter may cause increased conflict between fishers. It is noted that important fishing grounds for this fleet include areas that overlap with the Export Cable Corridor, with limited routine scallop dredge effort in the Array Area.
- 13.10.112 In relation to the scallop dredge fleet, the Applicant's commitment to mitigating justifiable disturbance experienced through temporary loss of access associated with Export Cable Corridor construction activities through Disruption Agreements is relevant in this scenario. The application of this Embedded Mitigation measure results in a magnitude of impact assessed as low adverse.
- 13.10.113 Demersal otter trawl fishery: Vessels within this fleet operate across a wide spatial range throughout the Regional Commercial Fisheries Study Area and further into the North Sea. Fishing grounds include areas that overlap with the inshore portion of the Export Cable Corridor within the 6 nm limit; however, demersal otter trawl activity within this area is low relative to more heavily targeted grounds located to the north and south of the Proposed Development, and there is very limited routine demersal trawl effort within the Array Area. Temporary loss of access during construction would therefore be expected to result in localised and short term displacement of a small proportion of fishing activity, with vessels able to redistribute effort to alternative grounds within their normal operational range without materially increasing steaming distances or constraining fishing opportunities. On this basis the magnitude of impact associated with displacement is assessed as low adverse.
- 13.10.114 Demersal seine fishery: Vessels in this fleet have an operational range throughout the Regional Commercial Fisheries Study Area and further into the North Sea. Whilst landings by demersal seine vessels are recorded from the Local Commercial Fisheries Study Area, there is no evidence of demersal seine activity within the Proposed Development with activity focused further north in the North Sea; any displacement associated with the Proposed Development is not expected to affect how demersal seine vessels routinely operate. Overall, the magnitude of impact for the demersal seine fleet is assessed as low adverse.

- 13.10.115 Pelagic trawl fishery: Pelagic fleets operate throughout the entirety of the North Sea, west of Scotland and Celtic Sea across a range of established fishing grounds. The fishery is highly seasonal. There are a limited number of pelagic vessels (e.g. approximately 22 in the Scottish fleet) that operate across a wide area targeting highly mobile species and catching to an allocated quota level. There is no evidence of pelagic trawl activity in the Proposed Development. Displacement is not expected to affect how pelagic vessels routinely operate, with fishing not being directly associated with seabed types and the target species being highly mobile. Overall, the magnitude of impact for the pelagic fleets is assessed as negligible adverse.
- 13.10.116 Handline fishery: This fishery is highly seasonal and operated within inshore grounds. Hotspots of activity are noted to the south of the Export Cable Corridor. Displacement is expected to be short term across the portion of Export Cable Corridor targeted; with effort likely to move into these higher importance areas located outside the Export Cable Corridor. Overall, the magnitude of the displacement impact is assessed to be low adverse for handline vessels.

Sensitivity of the Receptor

- 13.10.117 The majority of UK mobile commercial fisheries fleets (including demersal otter trawl, demersal seine, scallop dredge and handline fisheries) operating within and around the Proposed Development are considered to have moderate availability of alternative fishing grounds, and an operational range that is not limited to the Proposed Development or Local Commercial Fisheries Study Area. The proximity of the Proposed Development to key local fishing ports is noted. The fishing grounds from the coast out to and overlapping the Array Area, are expected to be considered by the local fleets to be ‘inshore’, in comparison to fishing grounds across the wider North Sea. For local fleets these ‘inshore’ grounds are assumed to be of relatively greater importance in comparison to alternative fishing grounds located further afield. All mobile fleets are deemed to be of medium vulnerability, with medium recoverability. The sensitivity of all UK mobile fleets is therefore, considered to be medium.
- 13.10.118 For the pelagic trawl fleet, the high level of alternative fishing grounds and lower reliance on the ‘inshore’ grounds closer to UK home ports results in a comparatively lower sensitivity than other mobile gear fleets. UK and non-UK pelagic fleets are deemed to be of low vulnerability, with medium recoverability; the sensitivity is therefore, considered to be low.
- 13.10.119 The UK potting fleet operates across wide areas inshore, typically within the 12 nm limit reflecting that most landings within the Local Commercial Fisheries Study Area are attributed to vessels of under 15 m length. This form of static fishing gear is considered to have a high vulnerability to gear conflict interactions since it is left unattended on the seabed. There is potential for any displacement from mobile vessels to lead to exploration of other fishing grounds outside the Proposed Development, which includes areas – notably within the nearshore portion of the Export Cable Corridor – currently targeted by potters. While grounds targeted by potters may not be suitable for other mobile gears due to substrate, the potential for gear conflict is well recognised

and becomes a more prevalent concern with increasing marine spatial squeeze (Szostek *et. al.*, 2025). In this context, potting is particularly sensitive to secondary displacement. The UK potting fleet are, therefore, deemed to be of high vulnerability, with medium recoverability. The sensitivity of the UK potting fleet is therefore, considered to be medium.

Significance of the Effect

- 13.10.120 Potting fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The low magnitude rating reflects the Applicant commitment to Disruption Agreements. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.121 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The low magnitude rating reflects the Applicant commitment to Disruption Agreements. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.122 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.123 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.124 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be negligible adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any pelagic trawl activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.
- 13.10.125 Handline fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.126 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

O&M Phase

- 13.10.127 Loss of access or exclusion from fishing grounds during O&M of the Proposed Development may lead to increases in fishing effort in other areas that may already be exploited thereby leading to gear conflict and increased pressure on adjacent fishing grounds.

Magnitude of Impact

- 13.10.128 This impact will indirectly affect fleets over a long term duration, noting an operational lifetime of approximately 30 years. The impact is predicted to be continuous with low reversibility for the lifetime of the Proposed Development and is of relevance to national and international fishing fleets.
- 13.10.129 During the O&M phase it is assumed that fishing activity will generally resume within the Proposed Development for most fishing gears. However, active fishing by all gears will not be possible within the physical footprint of turbine foundations, within areas of cable protection and cable crossings, or temporarily within the immediate vicinity of O&M activities. In addition, due to the size of the gear and the area required when actively fishing, pelagic trawl vessels are assumed not to routinely operate within the Proposed Development during the O&M phase. On this basis, the magnitude of displacement effects during the O&M phase is expected to be lower than that assessed during the construction phase.
- 13.10.130 Reflecting the mobile nature of fishing activity, the ability of vessels to resume fishing following completion of maintenance works, and the localised and intermittent nature of any restrictions during the O&M phase, displacement effects are not expected to affect the pelagic trawl and handline fleets, for which the magnitude of impact is assessed as negligible adverse. For all other fleets, any displacement during the O&M phase would be limited to very short term and localised interruption associated with turbine footprints, areas of cable protection or crossings, and the temporary presence of maintenance vessels. On this basis, the magnitude of displacement effects for these fleets is assessed as low.

Sensitivity of the Receptor

- 13.10.131 The sensitivity is as described for construction, summarised as medium for demersal otter trawl, demersal seine, scallop dredge, potting and handline fleets, and low for the pelagic trawl fleet.

Significance of the Effect

- 13.10.132 Potting fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.133 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.134 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.135 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be medium.

The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

13.10.136 Pelagic trawl fishery: The magnitude of impact is deemed to be negligible adverse, reflecting the absence of evidence of pelagic trawl activity within the Array Area. The sensitivity of the receptor is considered to be low. On this basis, the effect is assessed as **Negligible** adverse, which is not significant in EIA terms.

13.10.137 Handline fishery: The magnitude of impact is deemed to be negligible adverse, reflecting the absence of evidence of regular handline activity within the Array Area. The sensitivity of the receptor is considered to be medium. On this basis, the effect is assessed as **Negligible** adverse, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

13.10.138 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

Decommissioning Phase

Significance of the Effect

13.10.139 In the absence of a finalised Decommissioning Programme, the effects of decommissioning activities have been assessed on the basis that they will be comparable to those identified for construction. While decommissioning activities may ultimately be of shorter duration than construction, for assessment purposes they are assumed to occur over a similar timeframe in order to reflect a realistic MDS. It is acknowledged that, subject to the final Decommissioning Programme, some infrastructure (e.g. buried cables or cable protection) may be left *in situ*. In such cases, while fishing activity is expected to resume following completion of decommissioning works, this may not occur across the entire footprint of the Proposed Development, and some restrictions may remain, consistent with the assumptions applied during the O&M phase.

13.10.140 Potting fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The low magnitude rating reflects the Applicant commitment to Disruption Agreements. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

13.10.141 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The low magnitude rating reflects the Applicant commitment to Disruption Agreements. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

13.10.142 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

- 13.10.143 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.144 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Given the absence of evidence of any pelagic trawl activity in the Array Area, **Negligible** adverse significance is concluded, which is not significant in EIA terms.
- 13.10.145 Handline fishery: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.146 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

IMPACT 4 - DISTURBANCE OF COMMERCIALY IMPORTANT FISH AND SHELLFISH RESOURCES LEADING TO DISPLACEMENT OR DISRUPTION OF FISHING ACTIVITY

Construction Phase

- 13.10.147 Noise and seabed disturbances during the construction phase may decrease or displace commercially important fish and shellfish populations from the area. This section assesses the subsequent effect for the owners of fishing vessels, where commercially important stocks may be disturbed or displaced to a point where normal fishing practices would be affected.

Magnitude of Impact

- 13.10.148 Detailed assessments of the following potential construction impacts have been undertaken in Volume 2, Chapter 9: Fish and Shellfish Ecology:
- temporary habitat loss and/or disturbance;
 - long term habitat loss and/or disturbance;
 - introduction of artificial habitat and subsequent colonisation;
 - increased Suspended Sediment Concentrations (SSCs) and associated deposition; and
 - subsea noise impacting fish and shellfish receptors.
- 13.10.149 With respect to the magnitude of this impact on commercial fisheries, the overall significance of the effect on fish and shellfish species is considered (i.e. both the magnitude and sensitivity of fish and shellfish species are considered to assess the magnitude on Commercial Fishing fleets). This is because the overall effect on the fish and/or shellfish species relates directly to the availability and amount of exploitable resource. For instance, where an effect of minor adverse significance is assessed for a species, a low magnitude is assessed for Commercial Fishing, and so on.

13.10.150 Details of the fish and shellfish ecology assessment, together with the supporting evidence and justification are provided in Volume 2, Chapter 9: Fish and Shellfish Ecology. The fish and shellfish ecology assessment found all construction impacts to be of minor adverse significance for all fish and shellfish receptors, with exception of the effects of subsea piling noise on spawning herring. With a commitment from the Applicant to Additional Mitigation to reduce effects of subsea piling noise on spawning herring, the residual significance for spawning herring is also minor adverse.

13.10.151 The magnitude of impact on fish and shellfish species is predicted to be of regional spatial extent, of relevance to international fishing fleets, and of medium term duration. Impacts are predicted to affect receptors directly through temporary changes in the availability of exploitable resource. Accordingly, the magnitude of impact is considered to be low adverse for all Commercial Fishing fleets, reflecting the minor adverse residual significance identified for the fish and shellfish receptors.

Sensitivity of the Receptor

13.10.152 Exposure to the impact is likely and commercial fleets targeting key species may be affected, including Nephrops, haddock, scallop, brown crab, lobster and mixed demersal finfish.

13.10.153 Due to the range of areas targeted and the distribution of key commercial species throughout the northern, central and southern North Sea, all fleets are deemed to be of low vulnerability and high recoverability. The sensitivity of the receptor for all fisheries is therefore, considered to be low.

Significance of the Effect

13.10.154 Potting fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

13.10.155 Scallop dredge fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

13.10.156 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

13.10.157 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The

effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

13.10.158 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

13.10.159 Handline fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

13.10.160 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

13.10.161 As defined in Volume 2, Chapter 9: Fish and Shellfish Ecology, additional fish and shellfish ecology mitigation is considered to be necessary due to the potential for significant effects on herring resulting from underwater noise generated by piling activity. Mitigation options, to be secured via the Piling Strategy, are presented within Volume 2, Chapter 9: Fish and Shellfish Ecology that show how these significant effects on herring can be reduced to levels that are not significant. The residual effect will be **Minor** adverse, which is not significant in EIA terms.

O&M Phase

13.10.162 Habitat loss, Electromagnetic Field (EMF) and noise disturbances during the O&M phase may decrease or displace commercially important fish and shellfish populations from the area. This section assesses the subsequent effect for the owners of fishing vessels, where commercially important stocks may be disturbed or displaced to a point where normal fishing practices would be affected.

Magnitude of Impact

13.10.163 Detailed assessments of the following potential O&M impacts have been undertaken in Volume 2, Chapter 9: Fish and Shellfish Ecology:

- temporary habitat loss and/or disturbance;
- long term habitat loss and/or disturbance;
- introduction of artificial habitat and subsequent colonisation;
- increased SSCs and associated deposition;
- subsea noise impacting fish and shellfish receptors; and

- impacts to fish and shellfish receptors due to EMF.

13.10.164 The fish and shellfish ecology assessment found all O&M impacts to be of negligible to minor adverse significance for all fish and shellfish receptors. The potential effect on resources is not expected to be beyond what could be discernible from baseline conditions for fish and shellfish resources.

13.10.165 The magnitude of impact is predicted to be of regional spatial extent, of relevance to international fishing fleets, of long term duration and to affect the receptor directly. The magnitude is therefore considered to be low adverse for all species and all fishing fleets.

Sensitivity of the Receptor

13.10.166 Exposure to the impact is likely and commercial fleets targeting key species may be affected, including Nephrops, haddock, scallop, brown crab, lobster and mixed demersal finfish.

13.10.167 Due to the range of areas targeted and the distribution of key commercial species throughout the northern, central and southern North Sea, all fleets are deemed to be of low vulnerability and high recoverability. The sensitivity of the receptor for all fisheries is therefore, considered to be low.

Significance of the Effect

13.10.168 All fisheries: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

13.10.169 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

Decommissioning Phase

Significance of the Effect

13.10.170 The effects of decommissioning activities are expected to be the same or similar to the effects from construction.

13.10.171 All fisheries: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

13.10.172 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

IMPACT 5 - INCREASED VESSEL TRAFFIC ASSOCIATED WITH THE PROPOSED DEVELOPMENT WITHIN FISHING GROUNDS LEADING TO INTERFERENCE WITH FISHING ACTIVITY

Construction Phase

- 13.10.173 This section assesses the likely significant environmental effects arising from Proposed Development related vessel traffic and changes to shipping patterns as a result of any potential navigational channels leading to interference with fishing activity (reduced access) during construction.

Magnitude of Impact

- 13.10.174 Vessel movements (construction vessels transiting to and from areas undergoing construction works) related to the construction of Proposed Development and all associated Offshore Infrastructure will add to the existing level of shipping activity in the area, see Volume 2, Chapter 14: Shipping and Navigation for a full assessment of additional vessel movements.
- 13.10.175 Up to 25 (Array Area) and 16 (Export Cable Corridor) construction vessels on site at one time may occur throughout the construction phase and will include vessels which are Restricted in their Ability to Manoeuvre (RAM). Project vessels will be managed by Marine Coordination, including the use of traffic management procedures such as the designation of entry and exit points to and from the buoyed construction area. Project vessels will also carry AIS and be compliant with relevant Flag State regulations, including the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs), and comply with the procedures set out in the NSVMP (which will be a condition of consent).
- 13.10.176 Safety Zones will be applied for including up to 500 m around structures where vessels are undertaking construction work and 50 m around partially completed or completed surface piercing structures prior to commissioning of the Proposed Development. Such Safety Zones will protect project vessels involved in construction which may be RAM. If on site as deemed necessary via risk assessment, guard vessels will also assist with monitoring Safety Zones and alerting third party traffic to their presence.
- 13.10.177 Details of construction activities, including the presence of Safety Zones and any use of advisory safe passing distances, as defined by risk assessment, will be suitably promulgated to maximise awareness of ongoing construction activities.
- 13.10.178 Additionally, the use of International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) G1162 (IALA, 2021) compliant lighting and marking including lights, marks, sounds, signals and other aids to navigation as required by the NLB and the MCA will further maximise awareness, both in day and night conditions including in restricted visibility. This includes the buoyed construction area which will be agreed with the NLB prior to construction and within which project vessels undertaking construction activities will most likely be located during construction activities. In addition, the Applicant will endeavour, via the NSVMP, to identify areas unsuitable for construction vessel sheltering to minimise impacts on fishing activities to the extent practicable.

13.10.179 It is noted that continuous liaison with the fishing industry will be undertaken including location and duration of construction activities; further details are provided in Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan.

13.10.180 All fishing fleets are considered to be able to avoid vessel movements related to construction of the Proposed Development based on prior provision of construction details (timings and locations) allowing fishing vessels to plan their activities; use of traffic management procedures including entry and exit points for Proposed Development related vessels; use of buoyed construction area and adherence to the NSVMP. The magnitude is therefore, considered to be low adverse for all fisheries.

Sensitivity of the Receptor

13.10.181 Potting gear can be vulnerable to increased construction vessel movements within supply routes to and from entry and exit points due to risk of entanglement of construction vessel propellers with marker buoys of fishing gear. It is noted that construction vessels are likely to follow established shipping routes where possible. The sensitivity of the potting fleet is therefore, considered to be medium.

13.10.182 All other fishery fleets are expected to be in a position to avoid construction areas associated with the Proposed Development – on the basis of their mobile gear fishing methods and/or their limited presence within the Proposed Development - and their sensitivity is considered to be low.

Significance of the Effect

13.10.183 Potting fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

13.10.184 Scallop dredge fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

13.10.185 Demersal otter trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

13.10.186 Demersal seine fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

13.10.187 Pelagic trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect

is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

- 13.10.188 Handline fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.189 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

O&M Phase

- 13.10.190 This section assesses the likely significant environmental effects arising from project related vessel traffic and changes to shipping patterns as a result of any potential navigational channels leading to interference with fishing activity (reduced access) during O&M phase.

Magnitude of Impact

- 13.10.191 During the operation and maintenance phase (up to 30 years), a maximum of up to 12 vessels at any one time may be present within the Array Area and up to eight vessels at any one time within the Export Cable Corridor, including vessels that may be required to operate as RAM.
- 13.10.192 Based on the MDS, O&M activities within the Array Area may result in up to 588 vessel return trips per year, with a further 146 return trips spread over the 30-year O&M period. Within the Export Cable Corridor, O&M activities may result in up to 125 vessel return trips per year, with a further 114 return trips spread over the 30-year O&M period.
- 13.10.193 As per the construction phase impact, project vessels will be managed by Marine Coordination, carry AIS and be compliant with relevant Flag State regulations. Also, Safety Zones will be applied for including up to 500 m around structures where vessels are undertaking major maintenance work.
- 13.10.194 The magnitude of impact of interference of fishing activity due to the presence and transiting of maintenance vessels during the O&M phase is decreased compared to in the construction phase given that fewer project vessels will generally be on site at any time, noting the much longer duration of the O&M phase. Based on the low level of Proposed Development related vessel activity across a long time period, the magnitude is therefore, considered to be low adverse for all fisheries.

Sensitivity of the Receptor

- 13.10.195 The sensitivity is as described for the construction phase impact, summarised as medium for the potting fishing fleet; and low for all other fleets.

Significance of the Effect

- 13.10.196 Potting fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.197 Scallop dredge fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.198 Demersal otter trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.199 Demersal seine fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.200 Pelagic trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.201 Handline fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.202 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

Decommissioning Phase

Significance of the Effect

- 13.10.203 The effects of decommissioning activities are expected to be the same or similar to the effects from construction.
- 13.10.204 Potting fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.205 Scallop dredge fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect

is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

- 13.10.206 Demersal otter trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.207 Demersal seine fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.208 Pelagic trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.209 Handline fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.210 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

IMPACT 6 - ADDITIONAL STEAMING TO ALTERNATIVE FISHING GROUNDS FOR VESSELS THAT WOULD OTHERWISE FISH WITHIN THE PROPOSED DEVELOPMENT

- 13.10.211 A detailed Navigational Risk Assessment (NRA) (Volume 3, Technical Appendix 14.1: Shipping and Navigation Navigational Risk Assessment) has been undertaken and is discussed in Volume 2, Chapter 14: Shipping and Navigation, which includes full consideration of Commercial Fishing vessels while transiting (e.g. from a collision and allision perspective). This assessment focuses on the likely significant environmental effects arising from longer steaming distances to alternative fishing grounds that would have otherwise been targeted within the Proposed Development.

Construction Phase

Magnitude of Impact

- 13.10.212 Details of the construction activities will be promulgated in advance of, and during construction via the usual means (e.g. NtMs, Kingfisher bulletin) so that mariners are made aware of the ongoing works. Localised construction works will necessitate minor deviations for fishing vessels. Localised impacts are anticipated but will be limited to the immediate area of construction activity

and associated construction vessels. The vessel route density data for fishing vessels presented in Volume 3, Technical Appendix 13.1: Commercial Fisheries Technical Report, indicates clear existing transit routes.

- 13.10.213 For all fishing fleets with prior notification of construction activities, it is not expected that considerable additional steaming would be required to access fishing grounds outside those normally targeted within the Proposed Development. There may be an inconvenience to plan fishing around the construction activities, but this is not expected to result in additional steaming requirements above normal operating practices. The impact is predicted to be of regional spatial extent, medium term duration, intermittent and with high reversibility. It is predicted that the impact will affect the receptor directly. Based on the justifications above, the magnitude is therefore, considered to be low adverse for all fisheries.

Sensitivity of the Receptor

- 13.10.214 The demersal otter trawl, demersal seine, scallop dredge and pelagic trawl fisheries targeting the Local and Regional Commercial Fisheries Study Areas are understood to operate across wider areas of the North Sea and in the case of larger vessels, beyond this range. Given adequate notification it is expected that these vessels will be in a position to avoid construction areas within the Proposed Development with limited impact upon steaming times.
- 13.10.215 The UK potting fleet active in the Local and Regional Commercial Fisheries Study Areas operate across a range of grounds to haul and re-set different fleets of traps/pots on a daily basis. Their normal operating range is expected to extend beyond the Export Cable Corridor. Similarly, the normal operating range of the handline fleet is expected to extend beyond the Export Cable Corridor. Further to this, given adequate notification it is expected that these vessels will be in a position to avoid construction areas with limited impact upon steaming times.
- 13.10.216 All Commercial Fishing fleets are considered to have moderate availability of alternative fishing grounds and an operational range that is not limited to the Proposed Development. Assuming prior notification which will allow fishers to plan fishing activities, the sensitivity of the receptor is considered to be low for all fisheries.

Significance of the Effect

- 13.10.217 Potting fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.
- 13.10.218 Scallop dredge fishery; Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial

fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

- 13.10.219 Demersal otter trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.
- 13.10.220 Demersal seine fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.
- 13.10.221 Pelagic trawl fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.
- 13.10.222 Handline fishery: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.223 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

O&M Phase

Magnitude of Impact

- 13.10.224 The magnitude of impact of increased steaming times due to the presence of the Proposed Development during the O&M phase is expected to be the same or similar to that during construction for all fleets. While the O&M phase in longer duration (30 years) compared to construction, it is expected that fishing vessels will adjust to the presence of the Array Area over time. It is also noted that fishing vessels may choose to transit through the Array Area during the O&M phase. It is predicted that the impact will affect the receptor directly. Based on the justifications above, the magnitude is therefore, as described for the construction phase impact, summarised as low adverse for all fleets.

Sensitivity of the Receptor

- 13.10.225 The sensitivity is as described for the construction phase impact, and low for all fisheries.

Significance of the Effect

- 13.10.226 All fisheries: Overall, the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.227 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

Decommissioning Phase

Significance of the Effect

- 13.10.228 In the absence of a finalised Decommissioning Programme, the effects of decommissioning activities have been assessed on the basis that temporary removal works would be broadly comparable to those undertaken during construction. As such, the nature of temporary disturbance to commercial fishing receptors would be similar to that described for construction and is not repeated in full here.
- 13.10.229 Where infrastructure (e.g. Scour Protection or cable protection) remains *in situ* following decommissioning, any associated long term interaction risk for demersal fleets has been considered within the operational phase assessment.
- 13.10.230 All fisheries: Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be low. The effect will therefore be of negligible or minor adverse significance. Reflecting application of precaution in both the fish and shellfish ecology and commercial fisheries impact assessments, **Minor** adverse significance has been concluded, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.231 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

IMPACT 7 - INCREASED SNAGGING RISK, WHICH COULD RESULT IN LOSS OR DAMAGE TO FISHING GEAR

Construction Phase

- 13.10.232 The under construction and physical presence of semi-constructed Offshore Infrastructure on the seabed represents potential snagging points for fishing gear and could lead to damage to, or loss of, fishing gear. The safety aspects including potential loss of life as a result of snagging risk are assessed within Volume 2, Chapter 14: Shipping and Navigation.
- 13.10.233 Throughout the construction phase, Safety Zones will be applied for including up to 500 m around structures where vessels are undertaking construction work and 50 m around partially completed or completed surface piercing structures prior to commissioning of the Proposed Development.

Magnitude of Impact

- 13.10.234 In the instance that snagging does occur, and in line with the FMMCP (Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan) the Applicant will follow recognised good practice procedures for the management of fishing gear damage or loss. These procedures reflect established fisheries liaison practice within the offshore wind sector, including the processes described within Recommendations for Fisheries Liaison: Best Practice Guidance for Offshore Renewable Developers (FLOWW, 2025), in particular Section 7.2 of the 2025 guidance: Fishing Gear Damage/Loss.
- 13.10.235 Snagging poses a risk to fishing equipment and in extreme cases may potentially lead to capsizing of vessel and crew fatalities, as well as damage to subsea Offshore Infrastructure. Three phases of interaction are possible: initial impact of gear and subsea Offshore Infrastructure; pullover of gear across subsea Offshore Infrastructure; and snagging or hooking of gear on the subsea Offshore Infrastructure. The snagging or hooking of fishing gear with Offshore Infrastructure/cables on the seabed is the most hazardous to the vessel and crew due to the possibility of capsizing.
- 13.10.236 It is considered likely that fishermen will operate appropriately (adhering to Safety Zones and advisory distances and avoiding under construction Offshore Infrastructure and cable protection at the defined locations) given adequate notification of the locations of any snagging hazards and are highly likely to avoid the under construction Offshore Infrastructure and cable protection within the Proposed Development.
- 13.10.237 Based on the Embedded Mitigation and the commitment to follow standard protocols should snagging occur, the magnitude is considered to be low adverse for all fleets.

Sensitivity of the Receptor

- 13.10.238 Due to the nature and operation of mobile demersal and scallop dredge gear (it is actively towed and directly penetrates the seabed with near continuous contact) there is increased vulnerability to this impact, and the sensitivity is therefore considered to be medium for demersal otter trawl/seine and scallop dredge fisheries.
- 13.10.239 Potting gear shows a lower vulnerability as the gear is placed, not towed and is less likely to penetrate the seabed. The sensitivity of potters is considered to be low.
- 13.10.240 Pelagic trawl gear and handline jigging gear does not come into contact with the seabed and therefore has low vulnerability to snagging seabed infrastructure. The sensitivity of pelagic trawl fleets is considered to be low.

Significance of the Effect

- 13.10.241 Potting fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

- 13.10.242 Scallop dredge fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.243 Demersal otter trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.244 Demersal seine fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.245 Pelagic trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.246 Handline fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.247 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

O&M Phase

- 13.10.248 The physical presence of Offshore Infrastructure on the seabed represents potential snagging points for fishing gear and could lead to damage to, or loss of, fishing gear. The safety aspects including potential loss of life as a result of snagging risk are assessed within Volume 2, Chapter 14: Shipping and Navigation.
- 13.10.249 During O&M phase, a 500 m advisory safe passing distance around vessels undertaking major maintenance activities will be assumed around structures undergoing maintenance and associated vessels including remedial repair work to the Offshore Export Cables as required.

Magnitude of Impact

- 13.10.250 The protocols outlined for the construction phase impact will be followed during the O&M phase. The magnitude of effect is considered to be the same as during construction, summarised as low adverse for all fleets.

Sensitivity of the Receptor

- 13.10.251 The sensitivity is as described for the construction phase impact, summarised as medium for demersal otter trawl/seine, and scallop dredge fishing fleets; and low for pelagic trawl, potting and handline fishing fleets.

Significance of the Effect

- 13.10.252 Potting fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.253 Scallop dredge fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.254 Demersal otter trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.255 Demersal seine fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.256 Pelagic trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.257 Handline fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.258 No Additional Mitigation is considered necessary because the likely effect in the absence of Additional Mitigation is not significant in EIA terms.

Decommissioning Phase

Significance of the Effect

- 13.10.259 In the absence of a finalised Decommissioning Programme, the temporary effects of decommissioning activities have been assessed on the basis that removal works would be broadly comparable to those undertaken during construction. Accordingly, the nature of short-term disturbance to commercial fishing receptors would be similar to that described for construction. Any long term interaction associated with infrastructure that may remain *in situ* has been considered within the O&M phase assessment. Notwithstanding this, the presence of residual infrastructure on the seabed may continue to present a snagging risk and/or operational constraint to demersal fishing gears (e.g. trawls and dredges), and therefore may limit the extent to which such fishing activity can safely resume within the footprint of the Proposed Development, consistent with the assumptions applied during the O&M phase.

- 13.10.260 Potting fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.261 Scallop dredge fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.262 Demersal otter trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.263 Demersal seine fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.264 Pelagic trawl fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.
- 13.10.265 Handline fishery: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptor is low. The effect will therefore be of negligible or minor significance. Adopting a precautionary approach the effect is assessed to be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.10.266 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

13.11 Inter-Related Effects

- 13.11.1 For commercial fisheries, the following potential impacts have been considered within the inter-related assessment:
- reduction in access to, or exclusion from established fishing grounds within the Array Area;
 - reduction in access to, or exclusion from established fishing grounds within the Export Cable Corridor;
 - displacement leading to gear conflict and increased fishing pressure on adjacent grounds;
 - disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity;
 - increased vessel traffic associated with the Proposed Development within fishing grounds leading to interference with fishing activity;
 - additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Proposed Development; and

- increased snagging risk, which could result in loss or damage to fishing gear.

13.11.2 Inter-relationships are considered to be the impacts and associated effects of different aspects of the Proposed Development on the same receptor. Inter-related effects are considered to be either:

- Lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of the Proposed Development (construction, O&M and decommissioning), to interact to potentially create a more significant effect on a receptor than if just assessed in isolation in these three project stages (e.g. underwater sound effects from piling, operational Wind Turbines, vessels and decommissioning); or
- Receptor led effects: Assessment of the scope for all effects to interact, spatially and temporally, to create inter-related effects on a receptor. As an example, all effects on Infrastructure and Other Users, such as displacement of recreational activities and impacts to cables or pipelines or restrictions on access to these assets, may interact to produce a different, or greater effect on this receptor than when the effects are considered in isolation. Receptor led effects may be short-term, temporary or transient effects, or incorporate longer term effects.

13.11.3 Table 13.13 lists the inter-related effects (project lifetime effects) that are predicted to arise during the construction, O&M phase, and decommissioning of the Proposed Development and also the inter-related effects (receptor led effects) that are predicted to arise for commercial fisheries receptors.

13.11.4 As noted above, effects on commercial fisheries also have the potential to have secondary effects on other receptors and these effects are fully considered in the topic-specific chapters. These receptors and effects are:

- Fish and shellfish ecology:
 - displacement of fishing activities into other areas could increase fishing pressure in these areas and affect fish and shellfish receptors;
- Benthic subtidal ecology:
 - displacement of fishing activities into other areas could increase fishing pressure in these areas and affect benthic subtidal ecology receptors;
- Socio-economics, tourism and recreation:
 - reduced value of fish caught by commercial fisheries with potential downstream impacts, for example on fish processors.

Table 13.13: Summary of Likely Significant Inter-Related Effects for commercial fisheries from Individual Effects Occurring Across the Construction, O&M and Decommissioning Phase of the Proposed Development (Project Lifetime Effects) and from Multiple Effects Interacting Across all Phases (Receptor led Effects)

Description of Impact	Phase*			Likely Significant Inter-Related Effects
	C	O	D	
Project Lifetime Effects				
Reduction in access to, or exclusion from established fishing grounds within the Array Area	✓	✓	✓	Loss or restricted access to fishing grounds is considered to be temporary during construction and decommissioning. A buoyed construction area around the entirety of the Array Area as it is constructed and decommissioned will lead to loss of access. In the O&M phase it is assumed fishing can resume in the Proposed Development.
Reduction in access to, or exclusion from established fishing grounds within the Export Cable Corridor	✓	✓	✓	The effects on commercial fisheries across the project phases are not anticipated to overlap temporally, as construction, O&M and decommissioning occur sequentially. During the O&M phase, fishing activity is assumed to resume within the Proposed Development, subject to normal operational considerations. Decommissioning effects are temporary in nature and comparable in scale and duration to construction activities. As such, there is no pathway by which effects across phases would combine to result in a greater magnitude of impact than that identified for the individual phases. The overall effect is therefore assessed as Minor adverse and not significant in EIA terms.
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	✓	✓	✓	Fishing activity may be temporarily disrupted and displaced into adjacent areas during construction and decommissioning due to the temporary loss or restriction of access described above. However, these phases occur sequentially rather than concurrently, and fishing is assumed to resume within the Proposed Development during the O&M phase. Any redistribution of effort during construction or decommissioning is therefore temporary and does not represent a progressive or cumulative loss of fishing grounds across project phases. On this basis, the effects on commercial fisheries across the project phases are not anticipated to combine in a manner that would increase the magnitude of impact beyond that identified for each individual phase. The overall effect is therefore assessed as Minor adverse and not significant in EIA terms.
Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity	✓	✓	✓	The Proposed Development lifetime inter-related effects are unlikely as the nature of potential impacts differs during construction (underwater noise) and O&M phases (EMF, loss of habitat and increased SSCs and suspended sediments). Temporary and long term habitat loss which occurs across all phases is expected to be proportionally small in relation to habitat availability in the Local and Regional Commercial Fisheries Study Areas.

Description of Impact	Phase*			Likely Significant Inter-Related Effects
	C	O	D	
				The effects on commercial fisheries across the phases are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase and are therefore Minor adverse and not significant in EIA terms.
Increased vessel traffic associated with the Proposed Development within fishing grounds leading to interference with fishing activity	✓	✓	✓	With the successful implementation of Embedded Mitigation (i.e. issue of NtMs), preparation of a FMMCP, close liaison with the local vessels), no significant effects are predicted for the construction, O&M, and decommissioning phases of the Proposed Development. The majority of vessel traffic with potential to interfere with fishing activity is predicted to peak during construction and decommissioning with reduced potential for interference during the O&M phase. The effects on commercial fisheries across the phases are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase and are therefore Minor adverse and not significant in EIA terms.
Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Proposed Development	✓	✓	✓	Impacts on steaming and transit times are expected to be highest during construction and decommissioning when areas undergoing installation/decommissioning activities will be avoided. Vessels may also choose to avoid transiting through the Proposed Development during the O&M phase, though transit is deemed possible based on Wind Turbine spacing. The effects on commercial fisheries across the phases are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase and are therefore Minor adverse and not significant in EIA terms.
Increased snagging risk, which could result in loss or damage to fishing gear	✓	✓	✓	Impacts due to gear snagging may occur during the construction and O&M phases due to the presence of seabed infrastructure associated with the Proposed Development. At the end of the operational lifetime, above-seabed structures are expected to be removed, where feasible, with the final decommissioning approach to be defined within an approved Decommissioning Programme. Construction and decommissioning activities are temporary and occur sequentially, and do not increase the spatial extent of infrastructure beyond that assessed for the operational phase. As such, there is no mechanism by which effects across phases would combine to result in a greater magnitude of impact than that identified for each individual phase. The overall effect is therefore assessed as Minor adverse and not significant in EIA terms.

Description of Impact	Phase*			Likely Significant Inter-Related Effects
	C	O	D	
Receptor led Effects				
An inter-related receptor led effect may occur from the combination of the reduction in access to fishing grounds and the subsequent displacement and increased pressure on adjacent grounds.	✓	✓	✓	<p>An inter-related receptor led effect may occur from the combination of reduced access to fishing grounds and the subsequent redistribution of effort into adjacent areas. These effects have been assessed individually in accordance with the defined MDS and assessment methodology. While they may act concurrently during temporary construction or decommissioning works, the spatial extent of displacement is limited and alternative grounds are available within the wider Regional Commercial Fisheries Study Area. Redistribution of effort is therefore expected to be temporary and dispersed rather than concentrated in a manner that would materially increase pressure on specific grounds.</p> <p>On this basis, there is no mechanism by which the combined effect would exceed the magnitude identified for the individual impacts, and the inter-related effect is assessed as Minor adverse and not significant in EIA terms.</p>

* Proposed Development Phase refers to construction (C), O&M (O) and decommissioning (D).

13.12 Cumulative Effects Assessment

Methodology

- 13.12.1 The CEA assesses the impact associated with the Proposed Development together with other relevant projects and activities. Cumulative effects are defined as the effect of the Proposed Development in combination with the effects from a number of different projects, on the same receptor or resource. Further details on CEA methodology are provided in Volume 1, Chapter 4: Environmental Impact Assessment Methodology.
- 13.12.2 The projects selected as relevant to the CEA presented within this chapter are based upon the results of a screening exercise (see Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening). Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening provides further information in relation to other projects and how this information is obtained and applied to the assessment. Each project has been considered on a case-by-case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.
- 13.12.3 In undertaking the CEA for the Proposed Development, it is important to bear in mind that other projects under consideration will have differing potential for proceeding to an operational stage and hence a differing potential to ultimately contribute to a cumulative impact alongside the Proposed Development. Therefore, a tiered approach has been adopted. This provides a framework for placing relative weight upon the potential for each project to be included in the CEA to ultimately be realised, based upon the project's current stage of maturity and certainty in the projects' parameters. The tiered approach which will be utilised within the Proposed Development CEA employs the following tiers:
- Tier 1 – The onshore elements of the Project;
 - Tier 2 – Projects that have an application submitted, are consented, under construction or operational to the extent not already captured with the baseline;
 - Tier 3 – Projects which have submitted a scoping report and/or have received a scoping opinion; and
 - Tier 4 – Reasonably foreseeable projects including those with Crown Estate Scotland option or lease agreements.
- 13.12.4 The specific projects scoped into the CEA for commercial fisheries, are outlined in Table 13.14.
- 13.12.5 The range of potential cumulative impacts that are identified and included in Table 13.14 below, is a subset of those considered for the Proposed Development alone assessment. This is because some of the potential impacts identified and assessed for the Proposed Development alone, are localised and temporary in nature. It is considered therefore, that these potential impacts have limited or no potential to interact with similar changes associated with other projects. These impacts have therefore been scoped out of the CEA:

- Increased vessel traffic associated with the Proposed Development within fishing grounds leading to interference with fishing activity;
- Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Proposed Development; and
- Increased snagging risk, which could result in loss or damage to fishing gear.

- 13.12.6 Similarly, some of the potential impacts considered within the Proposed Development alone/assessment are specific to a particular phase of development (e.g. construction, O&M or decommissioning). Where the potential for cumulative effects with other projects only have potential to occur where there is spatial or temporal overlap with the Proposed Development during certain phases of development, impacts associated with a certain phase may be omitted from further consideration where no projects have been identified that have the potential for cumulative effects during this period.
- 13.12.7 The Commercial Fisheries CEA Study Area has been defined as the North Sea, which is considered to be representative of the fishing grounds exploited by the fleets active across the Regional Commercial Fisheries Study Area, for all fleets except scallop dredging. For scallop dredging the cumulative study area is defined at a UK level (Figure 13.5) this is because the UK fleet of scallop dredgers are nomadic in nature and target grounds across the North Sea, West of Scotland, Irish Sea and English Channel. The Commercial Fisheries CEA Study Area is presented in Figure 13.5. The projects included in the Commercial Fisheries CEA Study Area, relevant to all fishing fleets, are presented in Figure 13.6 and this is mapped with commercial fisheries data for demersal otter trawl (Figure 13.7), scallop dredge (Figure 13.8), pelagic trawl (Figure 13.9) and potting (Figure 13.10).
- 13.12.8 It is considered that other renewable projects in the North Sea, West of Scotland, Celtic Sea and English Channel have the potential to reduce access to fishing grounds, especially where floating foundations are proposed for OWF developments. This could lead to the potential cumulative effect of temporary (during construction and decommissioning) and long term (during O&M) loss or restricted access to fishing grounds. This incremental loss of fishing grounds is often termed ‘spatial squeeze’ and is a growing concern within the fishing industry. The loss of access to fishing grounds may lead to displacement at a cumulative level, where vessels are exploratory fishing and focusing effort in areas outside of cumulative developments. This could lead to the cumulative effect of incremental displacement throughout UK waters. This displacement effect and where a displaced fisher chooses to direct the displaced effort can be difficult to assign to a specific project, given that fishing operators are responding to multiple developments.
- 13.12.9 In addition, incremental disruption to fish and shellfish species could lead to cumulative displacement of the commercial resource. For example, at the ecosystem level OWFs and other developments in the marine environment could act as aggregation devices, attracting a different assemblage of species (which could in itself provide new commercial opportunity), or there could be

barrier effects. The fish and shellfish ecology assessment has considered potential cumulative effects to specific species and species groups, as presented within Volume 2, Chapter 9: Fish and Shellfish Ecology, with potential knock-on effects considered within this chapter for commercially exploited resources.

- 13.12.10 The remaining impacts to commercial fisheries, including interference with fishing activity due to Proposed Development related vessel movements, snagging risk and increased transit times are considered to be highly localised to specific projects. Given the scale of Proposed Development alone effects, any cumulative, additive effects across these impacts within the Commercial Fisheries CEA Study Area would be negligible across projects.
- 13.12.11 To summarise, impacts that are scoped into the CEA are:
- Reduction in access to, or exclusion from established fishing grounds within the Proposed Development;
 - Displacement leading to gear conflict and increased fishing pressure on adjacent grounds; and
 - Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity.
- 13.12.12 The approach to CEA screening of projects for commercial fisheries has taken a wide and inclusive approach, including many developments that are in operational phase. This is because these developments are recognised to continue to pose a potential impact on commercial fisheries through incremental loss of fishing grounds.

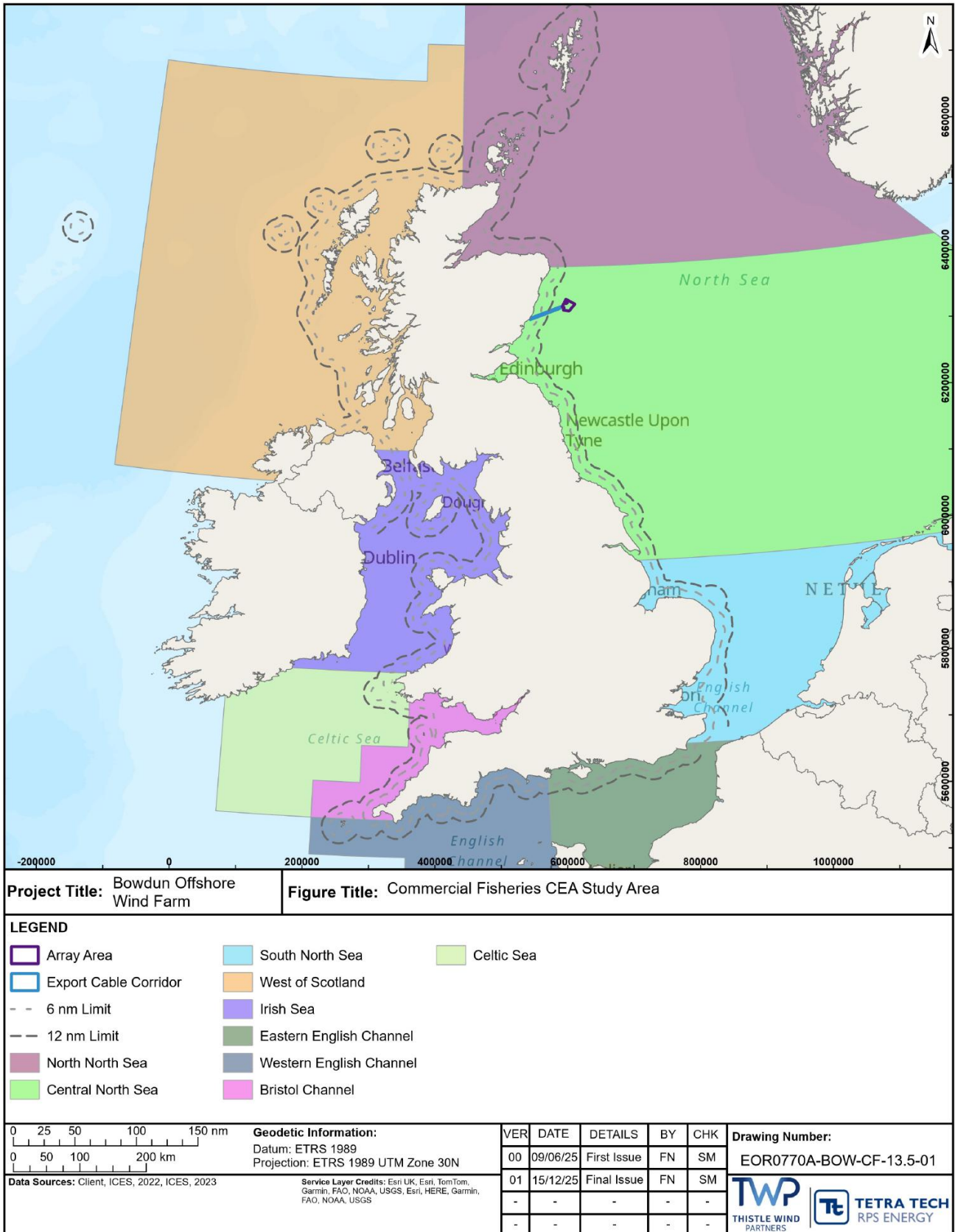


Figure 13.5: Commercial Fisheries CEA Study Area (the Scallop Dredge Fleet CEA Study Area Encompasses All Shaded ICES Divisions; the CEA Study Area for All Other Relevant Fleets is the North, Central and South North Sea ICES Divisions)

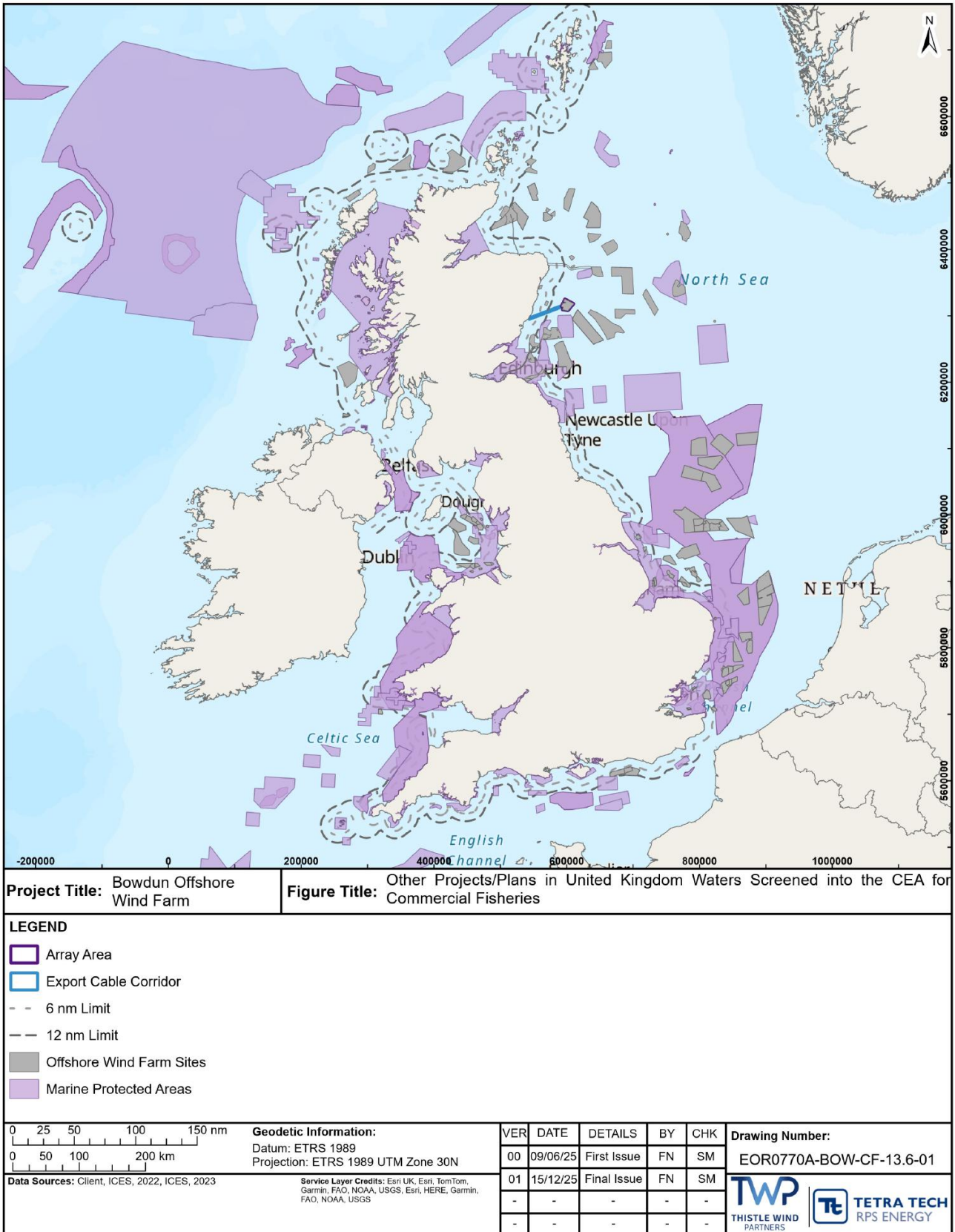


Figure 13.6: Other Projects/Plans in United Kingdom Waters Screened into the CEA for Commercial Fisheries

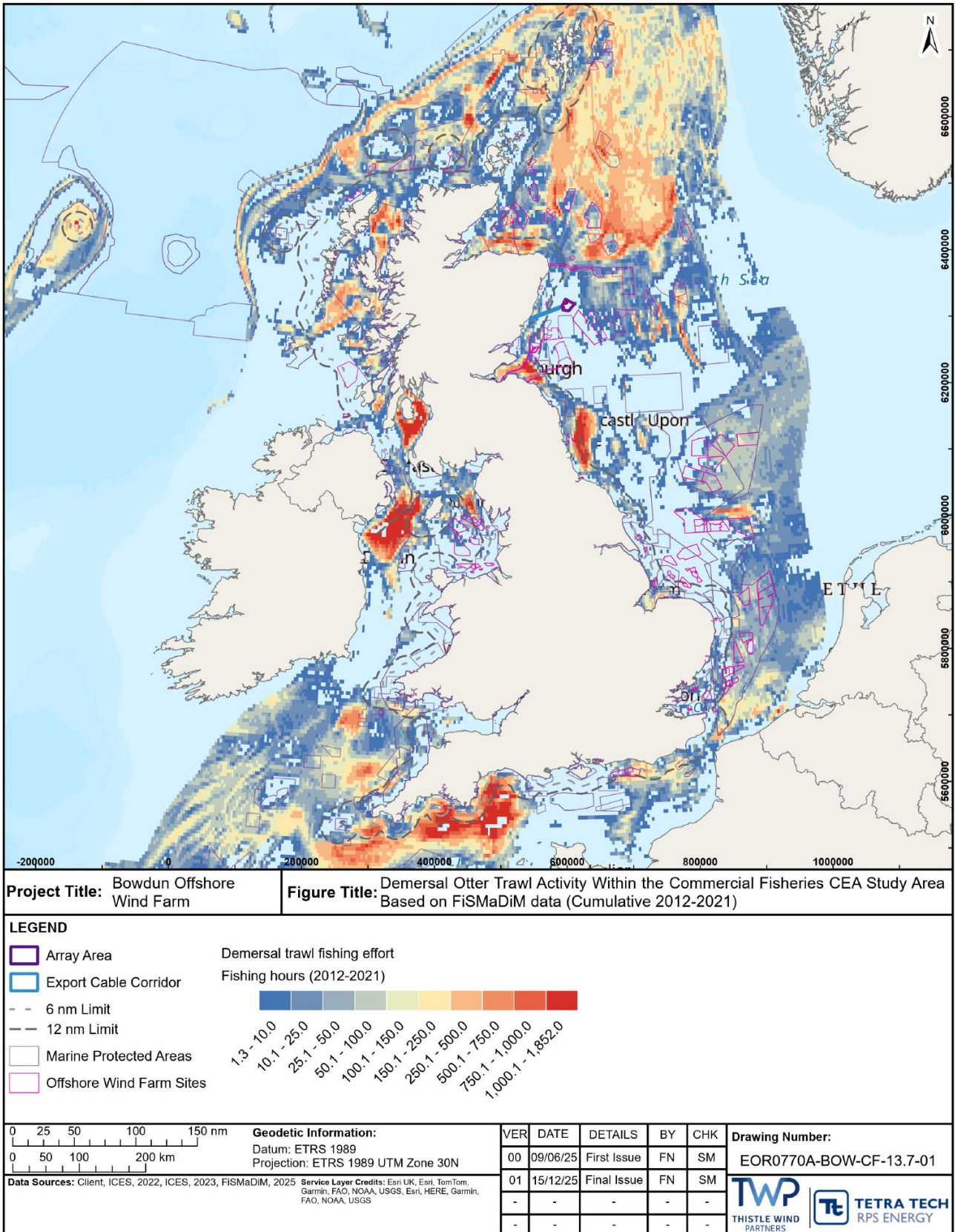


Figure 13.7: Demersal Otter Trawl Activity Within the Commercial Fisheries CEA Study Area

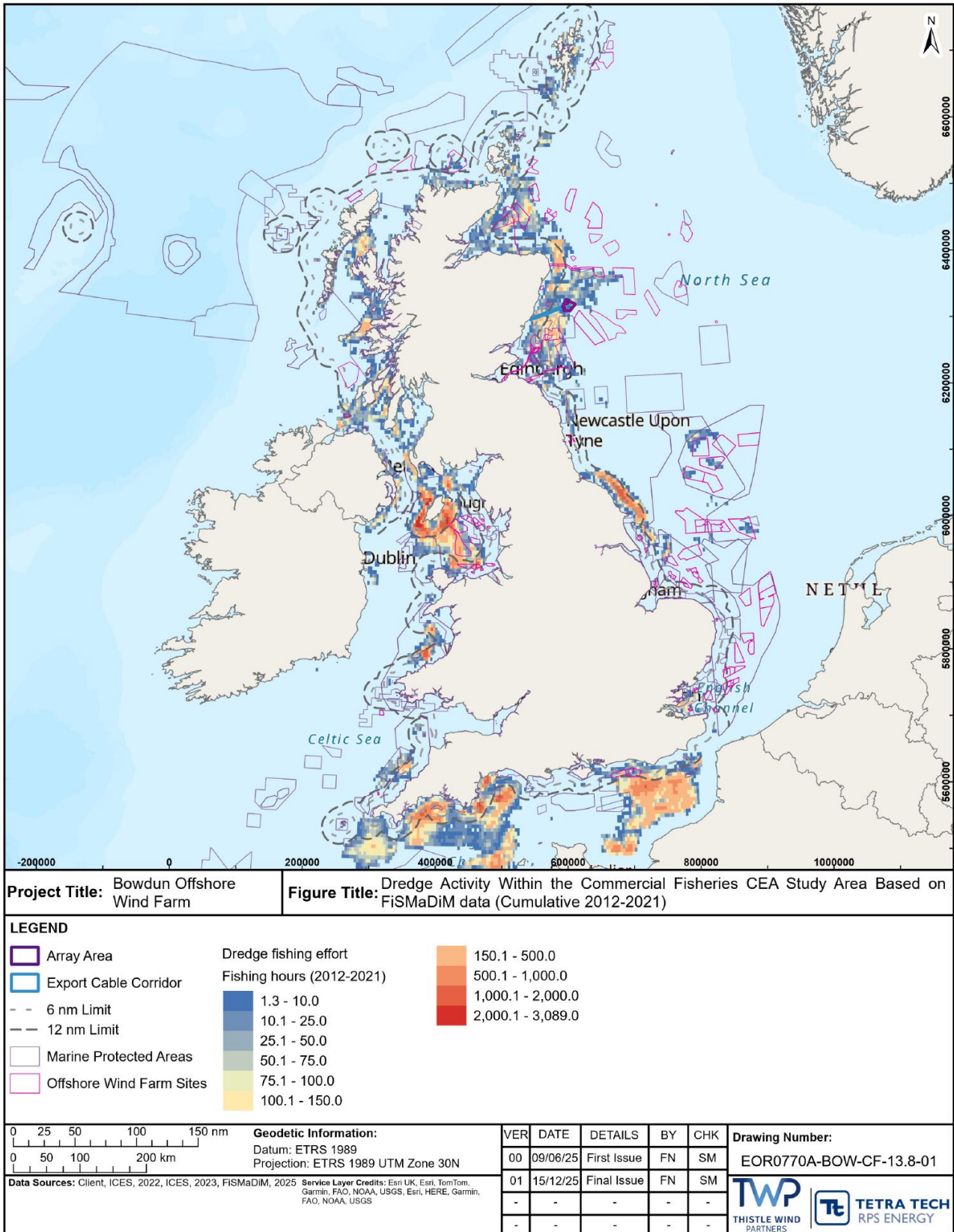


Figure 13.8: Scallop Dredge Activity Within the Commercial Fisheries CEA Study Area

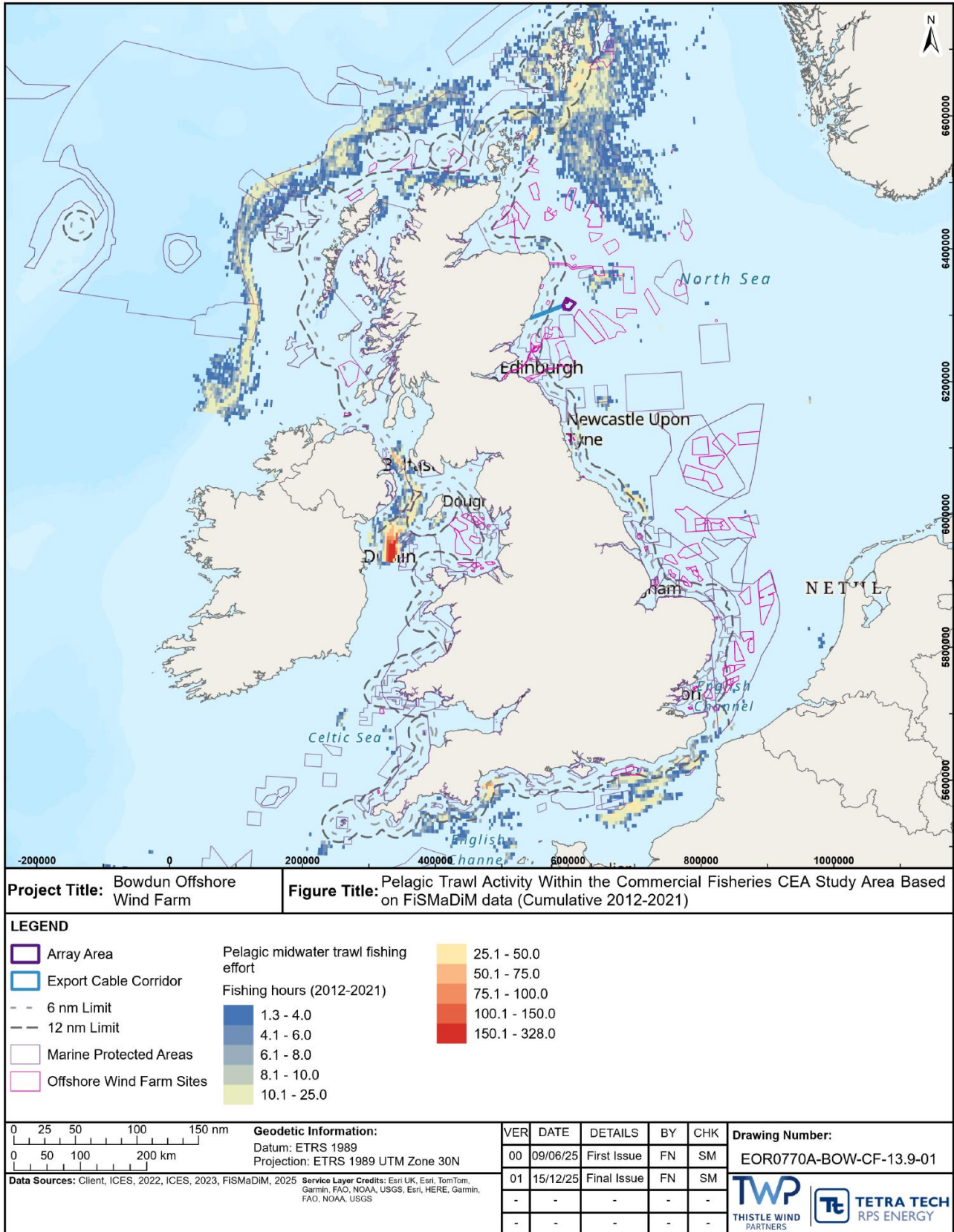


Figure 13.9: Pelagic Trawl Activity Within the Commercial Fisheries CEA Study Area

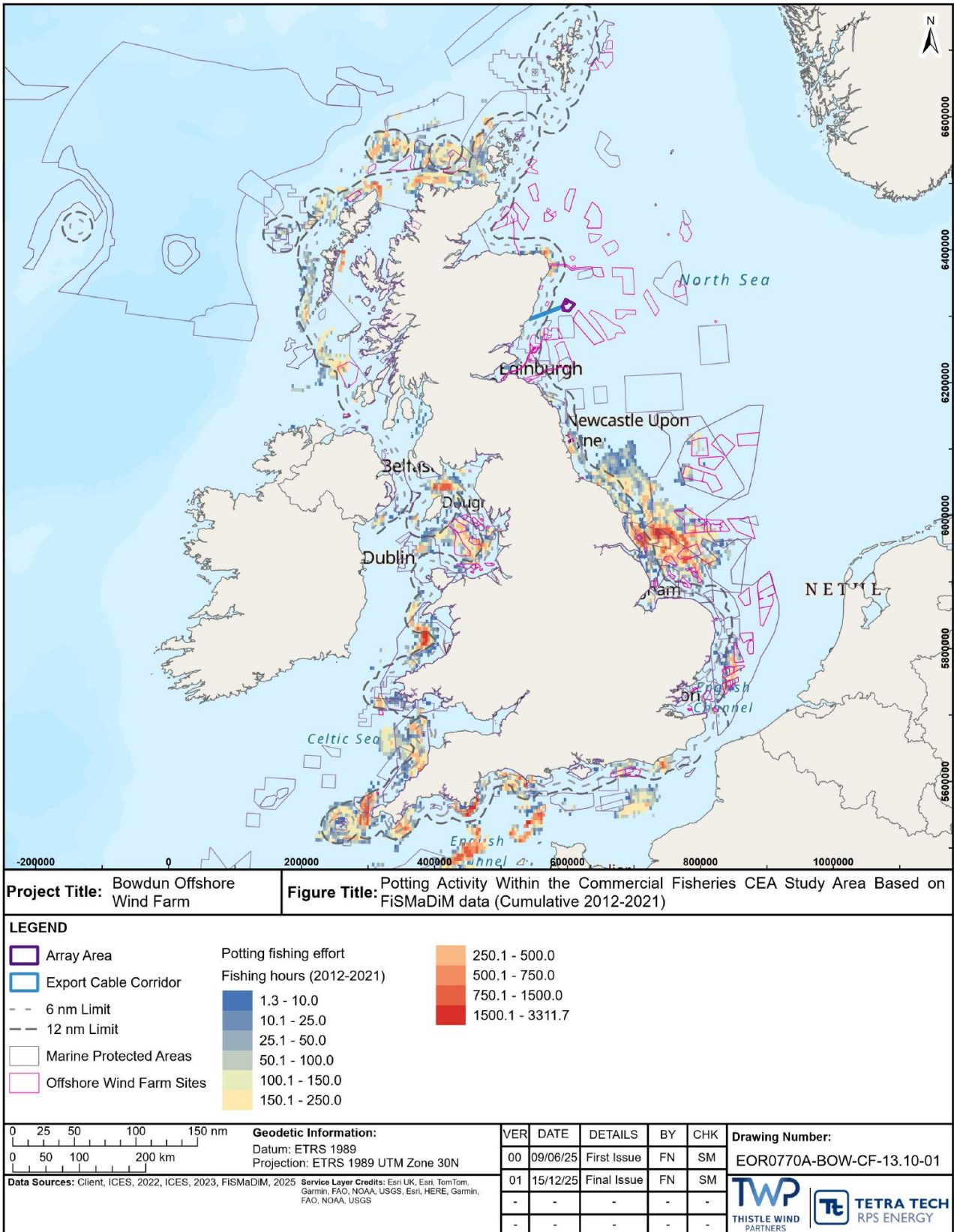


Figure 13.10: Potting Activity Within the Commercial Fisheries CEA Study Area

Table 13.14: List of Other Projects Considered within the CEA for Commercial Fisheries

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
Tier 1						
There were no Tier 1 Projects in the CEA long list brought forwards to the CEA for commercial fisheries.						
Tier 2						
Offshore Wind Projects and Associated Cables						
Kincardine OWF	Operational	20.14	Kincardine Offshore Wind Farm is consented for up to 7 wind turbines with 6 currently operational. Capacity of 50 MW.	N/A	2021-2046	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Ossian OWF	Application submitted but not yet determined	25.36	The Ossian Floating Wind project is proposed for up to 265 floating wind turbines with a capacity of 3,600 MW. Operational lifetime 35 years. Additional information submitted to MD-LOT October 2025 and January 2026.	2031-2038	2039-2073	The construction and O&M phases of this project have the potential to overlap with all phases of the Proposed Development. The decommissioning phases may also overlap.
Seagreen 1 Offshore Wind Farm	Operational	27.87	Seagreen 1 Offshore Wind Farm consists of up to 114 wind turbines at a capacity of 1,075 MW. Seagreen was consented with permission to install 150 wind turbines. The remaining 36 wind turbines are consented but not yet	N/A	2023-2047	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			constructed (Seagreen 1A project).			
Seagreen 1A Project	Consented	36.30	Seagreen 1A is made up of the 36 remaining wind turbines consented as part of the Seagreen 1 Offshore Wind Farm. Seagreen 1A submitted a variation in consent to allow construction to take place between 2029 and 2032.	2029-2032	2033 - 2057	The construction and O&M phases of this project have the potential to overlap with all phases of the Proposed Development. The decommissioning phases may also overlap.
Seagreen Phase 1A OFTO	Consented	42.87	Consent includes an export cable approximately 110 km in length to a landfall location at Cockenzie.	2029-2032	2033 onwards	The construction and O&M phases of this project have the potential to overlap with all phases of the Proposed Development. The decommissioning phases may also overlap.
Aberdeen OWF	Operational	38.60	Aberdeen OWF consists of up to 11 Wind Turbines at a capacity of 96.8 MW.	N/A	2018-2042	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Hywind Scotland Wind Farm (Buchan Deep Demo)	Operational	44.43	Floating offshore wind farm with 5 wind turbines and 30 MW installed capacity. The	N/A	2017-2037	The O&M and decommissioning phases of this project

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			wind farm started operating in 2017 with a design life of 20 years. Decommissioning is planned to be undertaken during Q2/Q3 2038.			has the potential to overlap with the construction and O&M phases of the Proposed Development.
Berwick Bank Wind Farm	Consented	46.53	Berwick Bank OWF is proposed for up to 307 Wind Turbines with a capacity of up to 4,100 MW.	2027-2032	2033 - 2067	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Berwick Bank OFTO (Cambois Connection)	Consented	46.53	Berwick Bank transmission is proposed for up to 4 cables with an operational lifetime of 35 years. Commencement of offshore construction expected in Q4 2026.	2026-2029	2030 - 2064	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Inch Cape OWF	Under construction	56.03	Inch Cape OWF is consented for up to 72 Wind Turbines with a capacity of 1,100 MW.	2024-2026	2027 - 2051	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
Inch Cape OFTO	Under construction	65.87	2 export cables with a capacity of 220 kV approximately 85 km in length between the landfall point at Cockenzie in East Lothian and the development area.	2024-2026	2027 - 2040	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Salamander OWF	Consented	58.68	Salamander OWF has a proposed capacity of up to 100 MW.	2027-2029	2030 - 2054	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Neart Na Gaoithe OWF	Operational	80.49	Neart na Gaoithe OWF is consented for up to 54 Wind Turbines at a capacity of 450 MW.	N/A	2025 - 2049	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Neart Na Gaoithe OFTO	Operational	86.23	2 export cables with 220 kV capacity to landfall location at Thorntonloch Beach on the East Lothian coast.	N/A	2025 - 2049	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
Aspen OWF	Application submitted but not yet determined	88.37	Floating offshore wind farm proposed for up to 1,000 MW and up to 72 Wind Turbines.	2027-2031	2032 - 2056	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Green Volt OWF	Consented	92.16	Green Volt Offshore Wind Farm is proposed for up to 35 wind turbines at a capacity of 560 MW. Construction phase anticipated to begin in 2025.	2027-2029	2030 - 2054	The O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
MarramWind OWF	Application submitted but not yet determined	112.04	Marram OWF is proposed for up to 150 Wind Turbines at a capacity of 3,000 MW.	2030-2040	2041 - 2065	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Muir Mhòr OWF	Application submitted but not yet determined	52.50	Muir Mhòr Offshore Wind Farm is proposed for up to 67 wind turbine at a capacity of 798 MW. Additional information	2027-2030	2031 - 2055	The O&M and decommissioning phases of this project has the potential to overlap with the

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			submitted to MD-LOT October 2025.			construction, O&M and decommissioning phases of the Proposed Development.
Methil Demo	Operational	126.29	Methil Demo consists of up to 1 wind turbine at a capacity of 7 MW.	N/A	2015-2028	The decommissioning phase of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Buchan OWF	Application submitted but not yet determined	131.73	Floating offshore wind farm is proposed for up to 70 floating wind turbines at a capacity of 1,000 MW. Project lifetime of 35 years.	2028-2030	2031 - 2065	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Caledonia OWF North	Application submitted but not yet determined	136.29	The North Site is proposed for up to 77 wind turbines with up to 140 wind turbines across the two sites (North and South). Caledonia Offshore Wind Farm (North and South) has an indicative generation capacity of 2,000 MW with an anticipated 35 years operational lifespan. Additional information	2028-2030	2031 - 2065	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			submitted to MD-LOT October 2025.			
Caledonia OWF South	Application submitted but not yet determined	121.35	The South Site is proposed for up to 78 wind turbines with up to 140 wind turbines across the two sites (North and South). Caledonia Offshore Wind Farm (North and South) has an indicative generation capacity of 2,000 MW with an anticipated 35 years operational lifespan. Additional information submitted to MD-LOT October 2025.	2028-2030	2031 - 2065	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Caledonia Offshore Wind Farm North Export Cable Route	Application submitted but not yet determined	99.24	The Caledonia North Offshore Export Corridor runs south through the Caledonia Site (North and South) to the landfall site at Stake Ness. Up to 2 export cables with maximum voltage of 275 kV and stretching up to 180 km.	2028-2030	2031 - Unknown	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Caledonia Offshore Wind Farm South Export Cable Route	Application submitted but not yet determined	99.24	The Caledonia South Offshore Export Corridor runs south to the landfall site at Stake Ness. Up to 2 export cables with	2028-2030	2031 - Unknown	The construction, O&M and decommissioning phases of this project has the potential to

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			maximum voltage of 275 kV and stretching up to 150 km.			overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Moray OWF (East)	Operational	138.55	Moray East OWF consists of up to 100 Wind Turbines at a capacity of 950 MW.	N/A	2022-2046	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Moray OWF (West)	Operational	143.99	Moray West OWF is consented for up to 60 Wind Turbines at a capacity of 882 MW.	N/A	2025-2049	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Cenos OWF	Application submitted but not yet determined	149.39	Proposed for up to 1,350 MW with up to 95 floating wind turbines.	2030-2034	2035 - 2059	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
Beatrice OWF	Operational	153.88	Beatrice OWF consists of 84 turbines at a capacity of 588 MW.	N/A	2019-2044	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Culzean Floating Offshore Wind Turbine Pilot Project	Consented	185.50	Culzean Floating Offshore Wind Turbine Pilot Project aims to deploy 1 floating wind turbine with a capacity of 3 MW, test floater and mooring system technologies. Marine licence variation granted in August 2025. Post-consent plans currently being submitted. Installation activities are expected to take around 1 month.	2026	2027-2035	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Ayre OWF	Application submitted but not yet determined	192.87	Up to 1,000 MW with proposed up to 67 wind turbines.	2030-2034	2035 - 2059	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Blyth Demo OWF – Phase 1	Operational	194.76	Blyth Demonstration 1 consists of up to 5 Wind	N/A	2018-2044	The O&M and decommissioning phases of this project

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			Turbines at a capacity of 41.5 MW.			has the potential to overlap with the construction and O&M phases of the Proposed Development.
Pentland Floating Offshore Wind	Consented	228.04	Pentland floating Offshore Wind Farm is consented for up to 6 wind turbines with a capacity of 100 MW. Up to 2 export cables making landfall at the Dounreay coast.	2027-2029	2030 - 2054	The O&M and decommissioning phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
West of Orkney Wind Farm	Consented	251.46	West of Orkney Wind Farm of up to 125 Wind Turbines at a capacity of 2,000 MW.	2028-2031	2032-2056	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Other English east coast OWFs and associated export cable corridors (including but not limited to Dogger Bank OWFs, Outer Dowsing, Five Estuaries, Sheringham Shoal Extension and Dudgeon Extension, Norfolk Vanguard West,	Various OWFs either under construction or in operation, with potential for an overlap in cumulative impacts associated with construction activities and the O&M phase. There is a potential for cumulative impacts arising from reduction in access to fishing grounds, displacement and fisheries resource effects. See Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening for detail.					

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
Norfolk Vanguard East, East Anglia Three, East Anglia Two, East Anglia One North)						
Other OWFs and associated export cable corridors in the North Sea, English Channel, Celtic Sea and Irish Sea	Various OWFs either under construction or in operation, with potential for an overlap in cumulative impacts associated with construction activities and the O&M phase. There is a potential for cumulative impacts arising from reduction in access to fishing grounds, displacement and fisheries resource effects. See Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening for detail.					
Other North Sea OWFs and associated export cable corridors off Belgium, Netherlands, Germany, France and Denmark OWF	Various OWFs either under construction or in operation, with potential for an overlap in cumulative impacts associated with construction activities and the O&M phase. There is a potential for cumulative impacts arising from reduction in access to fishing grounds, displacement and fisheries resource effects. See Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening for detail.					
Cables and Pipelines						
Eastern Green Link 2	Under construction	0.00	2 GW subsea cable connecting Peterhead in Aberdeenshire and Drax in North Yorkshire. Onshore construction commenced in 2025. Offshore construction begins in 2027.	2025-2028	2029 onwards	The O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Spittal to Peterhead High Voltage Direct Current (HVDC) Link Project	Under construction	62.49	Construction of a new 172 km, 2 GW, 525 kV subsea HVDC electricity transmission link in the Moray Firth. Marine licence granted 18 November 2025. Enabling works	2026-2029	2030 onwards	The O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			underway with main works starting in April 2026.			phases of the Proposed Development.
Tier 3						
Offshore Wind Projects and Associated Cables						
Morven Hawthorn Pit Grid Connection Project	Pre-Application	1.81	Consists of the onshore and offshore infrastructure associated with the Morven Offshore Wind Farm. Up to 6 export cables with a capacity of 525 Kv. Application is expected to be submitted in Q4 2026.	2029-2032	2033 onwards	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Morven North OWF	Pre-Application	10.03	Morven North Offshore Wind Array Project is proposed for up to 96 wind turbines at a capacity of 1,500 MW. Application of relevant consents and licences expected in 2026 with decision in 2027.	2030-2036	2037 - 2061	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Ossian Transmission Infrastructure	Pre-Application	25.28	Up to 6 export cables with a maximum total length of offshore cable route of 509 km. Anticipated application submission in the latter half of 2026. Operational lifetime 35 years.	2030-2033	2034 - 2068	The construction and O&M phases of this project have the potential to overlap with all phases of the Proposed Development. The decommissioning

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
						phases may also overlap.
Morven South OWF	Pre-Application	43.61	Morven South offshore Wind Array Project is proposed for up to 95 wind turbines at a capacity of 1500 MW. Application of relevant consents and licences expected in 2026 with decision in 2027.	2030-2036	2037 - 2061	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Bellrock OWF	Pre-Application	62.23	Bellrock OWF is proposed for a capacity of 1,800 MW with between 42 and 80 Wind Turbines.	2027-2030	2031 - 2055	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Broadshore OWF	Pre-Application	120.09	The Broadshore Offshore Wind Farm is proposed for a capacity of 900 MW with between 32 and 60 wind turbines.	2028-2029	2030 - 2054	The O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
Scaraben OWF	Pre-Application	125.19	Proposed between 3 and 6 wind turbines with a capacity of up to 99.5 MW.	2028-2029	2030 - 2054	The O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Sinclair OWF	Pre-Application	128.11	Proposed between 3 and 6 wind turbines with a capacity of up to 99.5 MW.	2028-2029	2030 - 2054	The O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Stromar OWF	Pre-Application	153.38	Stromar is a proposed floating offshore wind farm for up to 1,500 MW capacity. Scoping Opinion issued April 2024.	2028-2032	2033 - 2057	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Havbredey OWF	Pre-Application	303.20	Havbredey OWF is proposed for up to 110 Wind Turbines at a capacity of 1,500 MW.	2032-2035	2036 - 2060	The construction, O&M and decommissioning phases of this project has the potential to overlap with the

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
						construction, O&M and decommissioning phases of the Proposed Development.
Machairwind OWF	Pre-Application	319.51	MachairWind OWF is proposed for up to 147 Wind Turbines at a capacity of 2,000 MW.	2029-2032	2033 - 2057	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Arven OWF	Pre-Application	352.16	Arven is a 2,300 MW floating offshore wind development located to the east of the Shetland Islands. Scoping application for two array areas, Arven Array Area (360 km ²) and Arven South Array Area (100 km ²). Up to 161 wind turbines and 8 export cables.	2030-2034	2035 - 2059	The construction and O&M phases of this project has the potential to overlap with the construction and O&M phases of the Proposed Development.
Spiorad na Mara OWF	Pre-Application	345.58	Comprising up to 60 wind turbines, with an approximate capacity of 900 MW. Scoping opinion issued September 2023.	2028-2031	2032 - 2056	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, and O&M phases of the Proposed Development.

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
Talisk Offshore Wind Project	Pre-Application	346.58	Talisk Offshore Wind Farm is proposed for up to 33 wind turbines with a capacity of 495 MW. Scoping Opinion issued June 2025.	2029-2031	2032 - 2056	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, and O&M phases of the Proposed Development.
Stoura OWF	Pre-Application	381.15	Stoura Offshore Wind Farm is proposed for up to 500 MW capacity from up to 40 wind turbines. Anticipated 35 years lifetime. Scoping Opinion issued October 2025.	2031-2035	2036 - 2070	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Other OWFs and associated export cable corridors (including in the North Sea, English Channel, Celtic Sea and Irish Sea – e.g. Dogger Bank D, some Irish offshore wind farm projects)	Various OWFs at scoping stage, with potential for an overlap in cumulative impacts associated with construction activities and the operation phase. There is a potential for cumulative impacts arising from reduction in access to fishing grounds, displacement and fisheries resource effects. See Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening for detail.					
Cables and Pipelines						
Eastern Green Link 3	Pre-Application	6.28	Scoping application. The project comprises a 2 GW system linking Aberdeenshire in Scotland and Lincolnshire	2028-2030	2031 onwards	The O&M and decommissioning phases of this project has the potential to

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			in England. Approximately 575 km of subsea HVDC cable from Lincolnshire to a proposed Landfall at Sandford Bay, Peterhead.			overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Central North Sea Electrification (CNSE) Project	Pre-Application	36.00	Scoping request for the electrification of existing oil and gas infrastructure in the central North Sea. The infrastructure includes an onshore convertor station, an offshore convertor station, 66 kV offshore cabling connecting CNSE assets, 80 kV cabling to landfall, and 80 kV cabling from landfall to the onshore convertor station. Scoping Report submitted in May 2023.	2027-2028	2029 onwards	The O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Eastern Green Link 5	Pre-Planning	72.20	Eastern Green Link 5 (EGL5) is a new primarily offshore high voltage electricity link between Scotland and England. Approximately 555 km of subsea HVDC cable from the Lincolnshire coastline to Scotland. Cable landfall in Scotland to be confirmed.	2030–2034	2035 onwards	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Eastern Green Link 4	Pre-Application	94.96	Scoping application. The project comprises a 2 GW system linking Lincolnshire in	2027-2030	2031 onwards	The O&M and decommissioning phases of this project

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
			England and Fife in Scotland. Approximately 525 km of subsea HVDC cable from Lincolnshire to the Fife landfall either at Kinghorn or Largo Bay.			has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Nature Conservation Designations						
UK MPA network	A network of SACs, SPAs and Marine Conservation Zones (MCZs) is designated within the wider region, and fisheries management measures associated with these sites are being implemented or progressed. While such measures are regulatory in nature rather than development projects, they form part of the wider spatial context within which offshore wind development is occurring. The progressive implementation of fisheries management measures may influence patterns of fishing activity and contribute to spatial squeeze where combined with offshore wind developments. There is therefore potential for cumulative effects arising from reduced access to fishing grounds and associated displacement where offshore wind development footprints and fisheries management measures overlap spatially within the Commercial Fisheries CEA Study Area.					
Tier 4						
Offshore Wind Projects and Associated Cables						
Flora Floating Wind Farm	Pre-Planning	46.83	INTOG site 4 is proposed for up to 50 MW.	Unknown	Unknown	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Cedar OWF	Pre-Planning	104.26	Cedar OWF is proposed for up to 1,008 MW.	2026-2027	2028 - 2052	The O&M and decommissioning phases of this project has the potential to

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
						overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Beech OWF	Pre-Planning	189.50	Floating wind farm for up to 1,008 MW. Anticipating 50+ years of operations.	2026-2027	2028 - 2052	The O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Judy (HE Project)	Pre-Planning	212.25	Harbour Energy INTOG site is proposed for up to 15 MW.	Unknown	Unknown	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.
Malin Sea Wind OWF	Pre-Planning	358.19	Malin Sea Offshore Wind is proposed for up to 100 MW from around 6 wind turbines.	2030	2031 - 2055	The construction, O&M and decommissioning phases of this project has the potential to overlap with the construction, O&M and decommissioning phases of the Proposed Development.

Project	Status	Distance from Array Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
Other OWFs and associated export cable corridors in the North Sea, English Channel, Celtic Sea and Irish Sea (e.g. Round 5 Potential Development Areas)			Various OWFs at leasing/concept/early planning stage with potential for an overlap in cumulative impacts associated with construction activities and the operation phase. There is a potential for cumulative impacts arising from reduction in access to fishing grounds, displacement and fisheries resource effects. See Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening for detail.			
Other North Sea OWFs and associated export cable corridors off Belgium, Netherlands, Germany, France and Denmark			Various OWFs at leasing/concept/early planning stage with potential for an overlap in cumulative impacts associated with construction activities and the operation phase. There is a potential for cumulative impacts arising from reduction in access to fishing grounds, displacement and fisheries resource effects. See Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening for detail.			

Maximum Design Scenario

- 13.12.13 The MDS identified in Table 13.15 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. The cumulative effects presented and assessed in this section have been selected from the details provided in Volume 1, Chapter 3: Project Description as well as the information available on other projects (see Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment - Screening), to inform a 'MDS'. Any other development scenario within the PDE, will result in in the same, or less, level of environmental effect.

Table 13.15: MDS Considered for Each Impact as part of the Assessment of Likely Significant Cumulative Effects on Commercial Fisheries

Potential Cumulative Effect	Phase*			Tier	MDS
	C	O&M	D		
Reduction in access to, or exclusion from established fishing grounds	All phases			2	33 OWFs and associated export cables in the proximate North Sea: <ul style="list-style-type: none"> • Hywind Scotland Wind Farm (Buchan Deep Demo); • Beatrice OWF; • Aberdeen OWF; • Kincardine OWF; • Blyth Demo OWF – Phase 1; • Green Volt OWF; • Pentland Floating Offshore Wind; • Inch Cape OWF; • Inch Cape OFTO; • Moray OWF (East); • Moray OWF (West); • Neart Na Gaoithe OWF; • Neart Na Gaoithe OFTO; • Seagreen 1 Offshore Wind Farm; • Seagreen Phase 1A Project; • Seagreen Phase 1A OFTO; • West of Orkney Wind Farm; • Berwick Bank Wind Farm; • Berwick Bank OFTO; • Salamander OWF; • Methil Demo; • Buchan OWF; • Ossian OWF; • Cenos OWF; • Caledonia OWF North; • Caledonia OWF South;

Potential Cumulative Effect	Phase*			Tier	MDS
	C	O&M	D		
					<ul style="list-style-type: none"> • Caledonia Offshore Wind Farm North Export Cable Route; • Caledonia Offshore Wind Farm South Export Cable Route; • Muir Mhòr OWF; • Aspen OWF; • Culzean Floating Offshore Wind Turbine Pilot Project; • Ayre OWF; and • MarramWind OWF. <p>Other English east coast OWFs and associated export cable corridors (including Dogger Bank OWFs, Outer Dowsing, Five Estuaries, Sheringham Shoal Extension and Dudgeon Extension, Norfolk Vanguard West, Norfolk Vanguard East, East Anglia Three, East Anglia Two, East Anglia One North).</p> <p>Other OWFs and associated export cable corridors in the wider North Sea, English Channel, Celtic Sea and Irish Sea.</p> <p>Other North Sea OWFs and associated export cable corridors off Belgium, Netherlands, Germany, France and Denmark OWF.</p> <p>Two subsea cables:</p> <ul style="list-style-type: none"> • Eastern Green Link 2; and • Spittal to Peterhead HVDC Link Project.
				3	<p>13 OWFs and associated export cables in proximate Scottish waters:</p> <ul style="list-style-type: none"> • Morven North OWF; • Morven South OWF; • Havbredey OWF; • Bellrock OWF; • Broadshore OWF; • Scaraben OWF; • Sinclair OWF;

Potential Cumulative Effect	Phase*			Tier	MDS
	C	O&M	D		
					<ul style="list-style-type: none"> • Machairwind OWF; • Talisk Offshore Wind Project; • Spiorad na Mara OWF; • Stromar OWF; • Arven OWF; and • Stoura OWF. <p>Other OWFs and associated export cable corridors (including in the North Sea, English Channel, Celtic Sea and Irish Sea – e.g. Dogger Bank D, some Irish offshore wind farm projects).</p> <p>Four subsea cables:</p> <ul style="list-style-type: none"> • Eastern Green Link 3; • CNSE Project; • Eastern Green Link 5; and • Eastern Green Link 4. <p>UK MPA network</p>
				4	<p>Five offshore wind farms and associated export cables in proximate Scottish waters:</p> <ul style="list-style-type: none"> • Flora Floating Wind Farm; • Cedar OWF; • Beech OWF; • Judy (HE Project); and • Malin Sea Wind OWF. <p>Other OWFs and associated export cable corridors in the North Sea, English Channel, Celtic Sea and Irish Sea (e.g. Round 5 Potential Development Areas).</p> <p>Other North Sea OWFs and associated export cable corridors off Belgium, Netherlands, Germany, France and Denmark.</p>

Potential Cumulative Effect	Phase*			Tier	MDS
	C	O&M	D		
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	All phases				As per 'Cumulative reduction in access to, or exclusion from established fishing grounds'
Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity	All phases				As described for Volume 2, Chapter 9: Fish and Shellfish Ecology.

* Project Phase refers to construction (C), O&M (O) and decommissioning (D).

CEA

- 13.12.14 An assessment of the likely significance of the cumulative effects of the Proposed Development upon commercial fisheries receptors arising from each identified impact is given below.

REDUCTION IN ACCESS TO, OR EXCLUSION FROM ESTABLISHED FISHING GROUNDS

- 13.12.15 There is potential for cumulative reduction in access to or exclusion from established fishing grounds as a result of construction, maintenance and decommissioning activities associated with the Proposed Development and other projects that are under construction, in operation, or with planned decommissioning.

Construction Phase

Magnitude of Impact

Tier 2

- 13.12.16 The Tier 2 projects include fixed OWFs in Scottish and English waters, and beyond including off the coasts of France, Belgium, Netherlands, Germany, and Denmark. For OWFs within the UK jurisdiction, it is assumed that access would be possible for most gear types (with exception of pelagic trawl) and access to export cable routes also possible for most gears (noting that while MGN 661 advises that mobile fishing vessels with penetrative gear avoid submarine cables, cables are typically buried or protected to allow trawling, with the exception of dredging). Floating foundation OWFs are also included in the Tier 2 assessment, and it is assumed that fishing will not resume within these floating projects during all their phases.
- 13.12.17 For the purposes of this assessment, this cumulative effect has been assessed within the North Sea, which is considered to be a reasonable extent for the fishing grounds exploited by the commercial fisheries receptors active across the Local and Regional Commercial Fisheries Study Areas, for all fleets except scallop dredging. For scallop dredging this effect is assessed at a UK level; this is because the UK fleet of scallop dredgers are nomadic in nature and target grounds across the North Sea, west of Scotland, Irish Sea and English Channel.
- 13.12.18 Demersal otter trawl and demersal seine activity occurs throughout the North Sea, with highly defined grounds for targeting Nephrops (related to muddy habitat) and less defined grounds when targeting whitefish/mixed demersal species, including haddock and whiting. Defined grounds for the Nephrops fishery are noted primarily across the cable routes of Tier 2 OWFs, including in the Firth of Forth (Neart na Gaoithe and Inch Cape OWFs) and Moray Firth (Moray West OWF). Lower levels of demersal otter trawl activity are noted across the floating OWFs (Figure 13.7).
- 13.12.19 Scallop dredging is noted to occur across a number of Tier 2 projects in the North Sea; Caledonia North and South, Moray West and Dogger Bank A OWFs. Scallop dredging is evident within the 12 nm boundary adjacent to the north-east coast of Scotland (Figure 13.8).

- 13.12.20 Pelagic trawl activity occurs primarily in the central areas of the northern North Sea (Figure 13.9). There is very limited overlap with Tier 2 projects.
- 13.12.21 Potting VMS spatial data is not fully representative of the UK potting fleet because the data is only available for vessels 15 m and over, while the majority of the potting fleet is less than 15 m in length. Nevertheless, the potting VMS data does indicate areas of high activity for the 15 m and over fleet, specifically in waters out to 12 nm (Figure 13.10).
- 13.12.22 A number of operational OWFs are included in the Tier 2 assessment, which throughout their construction provided a range of mitigation directly to Commercial Fishing businesses. Fishermen have adapted their activities in response to the presence of these OWFs, including both operating within the arrays (for example, by adapting how and where gear is used or set); avoiding construction areas and returning to fishing grounds across export cables post construction and in certain instances over-trawl surveys to confirm resumption of fishing.
- 13.12.23 The Tier 2 OWFs are located in areas where scallop dredgers, demersal otter trawls and potting activity were likely to have been operated, with varying degrees of effort. Overall, the Commercial Fishing fleets have adapted to the presence of the OWFs and adjusted practices to allow fishing businesses to continue operation to some extent.
- 13.12.24 The potential for incremental loss of fishing grounds is recognised in the ABPmer (2022) spatial squeeze in fisheries report, which focused on assessment of mobile fishing gears in response to present and future scenarios for restricted access due to MPAs (included in Tier 3 of this assessment) and offshore developments including OWFs and cables.
- 13.12.25 The ABPmer study found that the spatial footprint of activities and policies that constrain mobile trawling gear types represents 23% of the UK EEZ area for the ‘present’ scenario (i.e. as of 2022). It is noted, however, that the scenarios for loss within the ABPmer (2022) report treat all areas equally, i.e. the report does not distinguish between areas that can actually be utilised (and are currently targeted) for fishing.
- 13.12.26 The ‘future 2030’ scenario predicted 36% of the UK EEZ would be restricted to trawling and the ‘future 2050’ worst case scenario predicted 49% of the UK EEZ would be restricted, with an area greater than 30,000 km² occupied by the renewable offshore wind sector. The ‘future 2050’ worst case scenario assumes mobile fishing would be restricted within all wind farms, which is noted to not necessarily be the case, but becomes the likely scenario for floating developments.
- 13.12.27 The ABPmer (2022) report highlights that the fishing industry has adapted to the ‘present’ scenario, based on the majority of restrictions being linked to nature conservation restrictions in waters deeper than 800 m, together with OWFs sited in areas not previously intensively trawled.
- 13.12.28 Overall, it is considered that the fishing industry will continue to adapt to operational projects included in the Tier 2 assessment, including active fishing within operational OWFs. This is expected to be the case for Tier 2 fixed

foundation OWF projects; with mitigation at individual project level and resumption of fishing during the operational phase.

- 13.12.29 Several floating OWFs are included in Tier 2. It is understood that these projects are either located in areas that are not expected to cause disruption to Commercial Fishing fleets or have developed project-specific mitigation to avoid impacts.
- 13.12.30 The cumulative impact is predicted to be of international spatial extent, medium to long term duration, continuous and low reversibility. It is predicted that the impact will affect the receptor directly. Given the adaptation of the Commercial Fishing sector to operational OWF developments and the avoidance of key fishing grounds and project level mitigation for Tier 2 floating OWFs, the magnitude is therefore, considered to be low adverse for Tier 2 projects for all fishing fleets.

Tier 3

- 13.12.31 The Tier 3 cumulative assessment includes all Tier 2 projects plus additional fixed and floating OWFs, together with the network of UK designated MPAs. Fisheries administrators across the UK are at various stages of implementing management measures within MPAs. The MMO recently (March 2024) implemented byelaws with prohibitions on bottom contact fishing gear within 13 MPAs (MMO, 2024)⁴. In a Scottish context, the Marine Directorate has implemented a series of Marine Conservation Orders (MCOs) and fisheries orders in MPAs and SACs, effective from 2022, and very recently introduced fisheries management measures (effective from October 2025) across several offshore MPAs introducing the Offshore Fishing (Prohibition of Fishing Methods) (Scotland) Order 2025 (the 2025 Order)⁵. Measures focus mainly on restricting or excluding demersal mobile gear (e.g. demersal trawls, scallop dredges, seines), with a mix of full-site closures and zonal restrictions depending on site features; for example, within the Firth of Forth Banks Complex Nature Conservation MPA which is proximate to the Morven Site, demersal mobile gear is prohibited in three zonal areas. A series of possible MCOs and fisheries orders for Scottish inshore MPAs remains under consideration and is planned to be subject to future consultation.
- 13.12.32 The scale of potential restrictions to the Commercial Fishing fleets is recognised, including through the ABPmer (2022) spatial squeeze analysis, as described under the Tier 2 assessment. Overall, there is potential for incremental loss of grounds to occur from Tier 3 OWFs and nature conservation management. Potential mitigation packages for Tier 3 floating OWFs are not yet fully developed and approved and therefore risk of significant cumulative impacts to loss of access remains for fishing fleets that typically operate across wider regional areas when targeting specific species.

⁴ [Bottom towed fishing gear prohibited over reef habitats in 13 marine protected areas - GOV.UK](#)

⁵ [Supporting documents - Offshore Marine Protected Areas - fisheries management measures: supporting guidance on coordinates and restrictions: - gov.scot](#)

- 13.12.33 The cumulative impact is predicted to be of international spatial extent, medium to long term duration, continuous and low reversibility. It is predicted that the impact will affect the receptor directly. Given the loss of access posed by OWFs, together with the anticipated introduction of fisheries management within the MPA network, the magnitude is therefore, considered to be medium for Tier 3 projects for demersal otter trawl/seine and scallop dredge fisheries and low adverse for all other fishing fleets.

Tier 4

- 13.12.34 The additional floating OWFs within Tier 4, when considered cumulatively with the Proposed Development, Tier 2 and Tier 3 projects, increase the overall spatial extent of temporary access restriction. However, the combined footprint does not represent a substantial or majority loss of available fishing grounds within the Regional Commercial Fisheries Study Area for the affected fleets. Fishing activity is distributed across a wider geographic area, and construction programmes are not assumed to occur entirely concurrently across all projects.
- 13.12.35 On this basis, the cumulative magnitude remains within the medium category (i.e. reflecting a moderate but not substantial restriction of access) and does not escalate to high magnitude. The Tier 4 projects therefore do not raise the magnitude beyond that identified for Tier 3, which is summarised as medium adverse for demersal otter trawl/seine and scallop dredge fisheries, and low adverse for other fleets.

Sensitivity of Receptor

- 13.12.36 All Commercial Fishing fleets are sensitive to incremental loss of access to fishing grounds because catching opportunities depend on reliable access to established grounds.
- 13.12.37 All Commercial Fishing fleets are deemed to be of high vulnerability, reflecting that many fleets show functional dependence on specific grounds and work under operational constraints, such as vessel size and weather limits. Fleets show medium recoverability, reflecting that there may be some capacity to adapt to loss of grounds over the long term (e.g. by switching to alternative grounds within their operational range, adjusting target species or modifying gear) but that this adaptive capacity is limited in a cumulative context whereby alternative grounds may already be constrained, and medium-high value with fleets making notable landings contributions. The sensitivity of all fisheries is therefore, considered to be medium.

Significance of Effect

- 13.12.38 UK demersal otter trawl/seine and scallop dredge fisheries: the magnitude of the cumulative impact is deemed to be medium, and the sensitivity of the receptor is medium. The cumulative effect will therefore be of **Moderate** adverse significance, which is significant in EIA terms. The contribution of the Proposed Development to this cumulative effect is considered inconsequential.
- 13.12.39 All other fleets: the magnitude of the cumulative impact is deemed to be low, and the sensitivity of the receptor is medium. The cumulative effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.12.40 Overall, following mitigation, the effect will be of moderate adverse significance for the demersal trawl/seine and scallop dredge fisheries, which is significant in EIA terms.
- 13.12.41 The Embedded Mitigation support the Proposed Development alone assessment outcomes of minor adverse significance during construction, O&M and decommissioning phases.
- 13.12.42 Mitigating the effect of other OWF developments and management measures being implemented within MPAs is not the responsibility of, nor possible by, the Applicant. However, the Applicant is open to working with the Scottish Government, the fishing industry and other offshore wind developers to explore strategic and coordinated monitoring. Monitoring is therefore proposed (see Section 13.13 for detail) to acknowledge and respond to the potential scale of cumulative effects on commercial fisheries receptors, and to validate the assumptions applied within the CEA at a regional scale.
- 13.12.43 The outcomes of this monitoring will be discussed through any regional commercial fisheries working group, and any future updates to the FMMCP may be informed by an improved understanding of changes in fishing activity identified through the proposed monitoring. While cumulative effects arise from the combined influence of multiple developments and fisheries management measures operating over wider spatial and temporal scales, the establishment of a clear linkage between monitoring and adaptive management means that, in this instance, the proposed monitoring is considered to constitute Additional Mitigation.
- 13.12.44 Overall, for the UK demersal otter trawl/seine and scallop dredge fisheries, following mitigation, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The residual effect will, therefore, be of **Minor** adverse significance, which is not significant in EIA terms.

O&M Phase

Magnitude of Impact

- 13.12.45 As per the construction phase.

Sensitivity of Receptor

- 13.12.46 As per the construction phase.

Significance of Effect

- 13.12.47 Over time Commercial Fishing fleets are expected to adjust to the presence of OWFs and, for certain gears, adapt to operate within fixed foundation array areas. However, given the inclusion of floating OWF projects within Tiers 2, 3 and 4, together with MPAs included at Tier 3, the effects of O&M activities are expected to be the same or similar to the effects from construction, summarised as **Moderate** adverse significance for UK demersal otter trawl/seine and scallop dredge fisheries and **Minor** adverse significance for all other fleets.

Additional Mitigation and Residual Effect

13.12.48 As per the construction phase.

Decommissioning Phase

Magnitude of Impact

13.12.49 As per the construction phase.

Sensitivity of Receptor

13.12.50 As per the construction phase.

Significance of Effect

13.12.51 As per the construction phase.

Additional Mitigation and Residual Effect

13.12.52 As per the construction phase.

DISPLACEMENT LEADING TO GEAR CONFLICT AND INCREASED FISHING PRESSURE ON ADJACENT GROUNDS

Construction Phase

Magnitude of Impact

Tier 2

- 13.12.53 The effect of displacement during construction leading to gear conflict and increased fishing pressure is directly correlated to the previous impact of reduced access to fishing grounds (i.e. if there is no reduction in access, then there will be no displacement). There is a low magnitude of impact for reduced access to fishing grounds from Tier 2 projects and therefore an ongoing cumulative displacement effect is not expected to be recognisable beyond baseline conditions. Resumption of fishing within existing OWFs included in Tier 2 is assumed for scallop dredge, potting and demersal otter trawl/seine and therefore displacement over time will have dissipated as Commercial Fishing fleets adapt and operate within fixed foundation OWFs. While pelagic trawl gear would not be feasible within Tier 2 OWFs, these are not located across grounds specifically targeted by pelagic trawl, and it is assumed that the opportunity to catch fish outside the OWF area is not wholly lost.
- 13.12.54 Displacement is possible in response to the floating OWF Tier 2 projects. However, it is expected that this will be limited in nature due to the project level mitigation and siting within lower levels of fishing activity. Furthermore, it is assumed that appropriately mitigated loss of access impacts associated with floating OWF projects would limit the effect of displacement.
- 13.12.55 The cumulative impact is predicted to be of international spatial extent, short to medium term duration and low reversibility. It is predicted that the impact will affect the receptor directly. Overall, based on the above justifications, the magnitude of impact of displacement is assessed as low adverse for all fleets.

Tier 3

- 13.12.56 The effect of displacement during construction leading to gear conflict and increased fishing pressure is directly correlated to the previous impact of reduced access to fishing grounds (i.e. if there is no reduction in access, then there will be no displacement). There is a medium magnitude of impact for reduced access to fishing grounds from Tier 3 projects cumulatively with the Proposed Development and Tier 2 projects, specifically due to the assumption that fishing will not resume within floating OWFs and therefore displacement is expected.
- 13.12.57 The cumulative impact is predicted to be of international spatial extent, medium term duration and low reversibility. It is predicted that the impact will affect the receptor directly. Given the loss of access posed by floating OWF included in the Tier 3 assessment (e.g. Arven, Bellrock, Broadshore, Havbredey, Marram, Stromar, Stoura, Talisk) and knock-on displacement effects, together with the anticipated introduction of fisheries management within the MPA network, the magnitude is therefore, considered to be medium adverse for Tier 3 projects for demersal otter trawl/seine and scallop dredge fisheries and low adverse for all other fishing fleets.

Tier 4

- 13.12.58 The cumulative impact is predicted to be of international spatial extent, medium to long term duration and low reversibility. It is predicted that the impact will affect the receptor directly. The additional floating OWFs within Tier 4 cumulatively with the Proposed Development plus Tier 2 and Tier 3 raise the cumulative effect of displacement, however this rise is considered to remain within the medium magnitude category (i.e. leading to moderate loss of access to fishing grounds) and does not enter the high magnitude category (i.e. leading to substantial loss of access to fishing grounds). The Tier 4 projects are not considered to raise the category of magnitude of impact beyond what is assessed for Tier 3, summarised as medium adverse for demersal otter trawl/seine and scallop dredge fisheries and low adverse for all other fishing fleets.

Sensitivity of Receptor

- 13.12.59 Where any reduction in access to fishing grounds occurs, some degree of effort relocation is required. All fishing fleets are constrained by a combination of target species location, gear limits, operational range and quota/licensing requirements, amongst other factors, and therefore all Commercial Fishing fleets are sensitive to displacement into other areas. All fleets are deemed to be of high vulnerability and medium recoverability (i.e. the fleets may be considered dependent on specific grounds and recovery to what may be considered normal operations would take time - particularly in a cumulative context where the available fishing area is progressively reduced - noting that even where some fleets have the ability to relocate, there are consequences of having to do so, such as gear conflict). The sensitivity of the receptor is therefore, considered to be medium.

Significance of Effect

- 13.12.60 UK demersal otter trawl/seine and scallop dredge fisheries: the magnitude of the cumulative impact is deemed to be medium, and the sensitivity of the receptor is medium. The cumulative effect will therefore be of **Moderate** adverse significance, which is significant in EIA terms. The contribution of the Proposed Development to this cumulative effect is considered inconsequential.
- 13.12.61 All other fleets: the magnitude of the cumulative impact is deemed to be low, and the sensitivity of the receptor is medium. The cumulative effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.12.62 Overall, following mitigation, the effect will be of moderate adverse significance for the demersal trawl/seine and scallop dredge fisheries, which is significant in EIA terms.
- 13.12.63 The Embedded Mitigation support the Proposed Development alone assessment outcomes of minor adverse significance during construction, O&M and decommissioning phases.
- 13.12.64 Mitigating the effect of other OWF developments and management measures being implemented within MPAs is not the responsibility of, nor possible by, the Applicant. However, the Applicant is open to working with the Scottish Government, the fishing industry and other offshore wind developers to explore strategic monitoring options, and monitoring is proposed (see Section 13.13 for detail) to acknowledge and respond to the scale of potential cumulative effects on commercial fisheries receptors and the potential benefits of coordinated monitoring at a regional scale to validate CEA outcomes. Monitoring outcomes will be discussed with the regional commercial fisheries working group and any future updates to the FMMCP may be informed by an understanding of any changes in fishing activity as picked up by the monitoring proposed. Whilst no single project or Applicant can define or resolve these potential cumulative effects in isolation, as they result from the combined influence of multiple developments and fisheries management measures over a wider spatial and temporal scale, with this linkage established between the monitoring activity and possible future updates to the FMMCP, in this instance monitoring is considered to be Additional Mitigation.
- 13.12.65 Overall, for the UK demersal otter trawl/seine and scallop dredge fisheries, following mitigation, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The residual effect will, therefore, be of Minor adverse significance, which is not significant in EIA terms.

O&M Phase

Magnitude of Impact

- 13.12.66 As per the construction phase.

Sensitivity of Receptor

- 13.12.67 As per the construction phase.

Significance of Effect

- 13.12.68 Over time Commercial Fishing fleets are expected to adjust to the presence of OWFs and for displacement effects to stabilise. However, given the inclusion of floating OWF projects within Tiers 2, 3 and 4, together with MPAs included at Tier 3, the level of displacement has the potential to have long term effects based on continuous competition for fishing grounds as spatial squeeze pressures increase.
- 13.12.69 The effects of O&M activities are expected to be the same or similar to the effects from construction, summarised as **Moderate** adverse significance for UK demersal otter trawl/seine and scallop dredge fisheries and **Minor** adverse significance for all other fleets.

Additional Mitigation and Residual Effect

- 13.12.70 As per the construction phase.

Decommissioning Phase

Magnitude of Impact

- 13.12.71 As per the construction phase.

Sensitivity of Receptor

- 13.12.72 As per the construction phase.

Significance of Effect

- 13.12.73 As per the construction phase.

Additional Mitigation and Residual Effect

- 13.12.74 As per the construction phase.

DISTURBANCE OF COMMERCIALY IMPORTANT FISH AND SHELLFISH RESOURCES LEADING TO DISPLACEMENT OR DISRUPTION OF FISHING ACTIVITY

Construction Phase

Magnitude of Impact

Tier 2

- 13.12.75 The cumulative effects for fish and shellfish ecology have been assessed in Volume 2, Chapter 9: Fish and Shellfish Ecology, covering the following effects during the construction phase:
- temporary habitat loss and/or disturbance;
 - long term habitat loss and/or disturbance;
 - introduction of artificial habitat and subsequent colonisation;
 - increased SSCs and associated deposition; and
 - subsea noise impacting fish and shellfish receptors.

- 13.12.76 Details of the fish and shellfish ecology assessment, together with the supporting evidence and justification are provided in Volume 2, Chapter 9: Fish and Shellfish Ecology. The fish and shellfish ecology assessment found all cumulative construction impacts to be of minor adverse residual significance for all fish and shellfish receptors (noting Additional Mitigation has been developed to reduce potentially significant impacts on spawning herring). The magnitude of impact is predicted to be of local spatial extent and of medium term duration. It is predicted that the impact will affect the receptor directly through loss of resources. The magnitude of impact in relation to commercial fisheries receptors is deemed to be low adverse magnitude.

Tier 3 and Tier 4

- 13.12.77 The Tier 3 and Tier 4 projects are not considered to materially increase the spatial extent or duration of cumulative effects beyond that identified for Tier 2. The principal areas of overlap with commercial fishing activity are already captured within the Tier 2 assessment, and the additional Tier 3 and Tier 4 projects do not result in a substantial increase in the proportion of fishing grounds affected within the Commercial Fisheries CEA Study Area. Furthermore, construction activities are not assumed to occur fully concurrently across all projects. On this basis, the cumulative magnitude of impact remains low adverse for all commercial fishing fleets.

Sensitivity of Receptor

- 13.12.78 All Commercial Fishing fleets exhibit sensitivity to the disturbance of their target species or resources. This is because fishing operations are dependent on the spatial and temporal distribution of specific target stocks.
- 13.12.79 All Commercial Fishing fleets are deemed to be of high vulnerability, medium recoverability and medium-high value. The sensitivity of the receptor is therefore, considered to be medium.

Significance of Effect

- 13.12.80 All fisheries: the magnitude of the cumulative impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The cumulative effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 13.12.81 No Additional Mitigation is considered necessary because the likely effect is not significant in EIA terms.

O&M Phase

Magnitude of Impact

Tier 2

- 13.12.82 The cumulative effects for fish and shellfish ecology have been assessed in Volume 2, Chapter 9: Fish and Shellfish Ecology, covering the following effects during the O&M phase:

- temporary habitat loss and/or disturbance;
- long term habitat loss and/or disturbance;
- introduction of artificial habitat and subsequent colonisation;
- increased SSCs and associated deposition;
- subsea noise impacting fish and shellfish receptors; and
- impacts to fish and shellfish receptors due to EMF.

13.12.83 Overall cumulative effects on fish and shellfish ecology during O&M are assessed to be of minor adverse significance. Therefore, the magnitude of effect to commercial fisheries resources is assessed as low adverse for all commercial fishery fleets.

Tier 3 and Tier 4

13.12.84 The Tier 3 and Tier 4 projects are not considered to raise the magnitude of impact beyond what is assessed for Tier 2, summarised as low for all Commercial Fishing fleets. This is due to any effects being highly localised to specific projects and not considered to result in any effect detectable at species stock levels.

13.12.85 All Commercial Fishing fleets exhibit sensitivity to the disturbance of their target species or resources. This is because fishing operations are dependent on the spatial and temporal distribution of specific target stocks.

13.12.86 All Commercial Fishing fleets are deemed to be of high vulnerability, medium recoverability and medium-high value. The sensitivity of the receptor is therefore, considered to be medium.

Significance of Effect

13.12.87 All fleets: the magnitude of the cumulative impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The cumulative effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

13.12.88 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

Decommissioning Phase

Significance of Effect

13.12.89 The effects of decommissioning activities are expected to be the same or similar to the effects from construction.

13.12.90 All fleets: the magnitude of the cumulative impact is deemed to be low adverse, and the sensitivity of the receptor is medium. The cumulative effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

13.12.91 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

13.13 Proposed Monitoring

- 13.13.1 Consideration has been given by the Applicant to the potential role that commercial fisheries monitoring may have in contributing to an improved understanding of how fishing activity may respond to the presence of the Proposed Development in combination with other OWF developments in the region. This reflects the scale and complexity of potential cumulative effects on commercial fisheries receptors, alongside recognised limitations in the publicly available evidence base relating to long term changes in fishing activity in areas subject to multiple OWF developments.
- 13.13.2 The assessment of the Proposed Development alone identifies no significant effects on commercial fisheries in EIA terms. As such, the Proposed Development in isolation does not give rise to a specific requirement for monitoring. Consideration of monitoring in this context is instead related to the potential value of strategic, regionally coordinated approaches that may support the validation of cumulative effects assessments and contribute to the wider evidence base. Any contribution by the Applicant would be proportionate to the limited contribution of the Proposed Development to cumulative effects and would focus on participation in any regionally coordinated monitoring initiatives that may be developed.
- 13.13.3 It is recognised that, where commercial fisheries monitoring is undertaken in the context of cumulative OWF development, it may be more effectively addressed through a holistic and inclusive regional approach, rather than through isolated project-specific monitoring programmes. Any monitoring arrangements, should they be progressed, would therefore be expected to be developed collaboratively, where appropriate, with other offshore wind developers and relevant stakeholders.
- 13.13.4 In this context, the Applicant would seek to engage with the East Region Commercial Fisheries Working Group and other relevant parties to discuss opportunities to contribute to the development of a strategic, regionally coordinated approach to commercial fisheries monitoring. Such an approach may seek to make appropriate use of existing data sources and industry knowledge to improve understanding of spatial and temporal patterns in Commercial Fishing activity over time, in a manner that is consistent across developments and proportionate to the scale of effect. The Applicant will participate in these regional discussions where they occur and will consider proportionate contributions to any agreed collaborative monitoring framework.
- 13.13.5 Any participation in a strategic monitoring initiative would be proportionate and non-substitutive, such that the withdrawal or non-delivery of individual projects from a group initiative would not result in additional monitoring obligations being placed on remaining developments.
- 13.13.6 Monitoring outputs, where available and relevant, could be considered for use in informing future iterations of the FMMCP, subject to consultation and agreement. The scope, methodology, duration and governance of any monitoring would be determined through the collaborative process and would reflect

relevant guidance, the evolving evidence base, and the cumulative development context.

13.13.7 The approach outlined above is consistent with Scottish Government guidance on commercial fisheries monitoring and reflects consideration of evidence gaps identified through Scottish Marine Energy Research (ScotMER) in relation to Commercial Fishing activity in the vicinity of OWFs and associated infrastructure.

13.13.8 Intended Applicant monitoring commitments are presented in Table 13.16.

Table 13.16: Commercial Fisheries Monitoring Commitments

Potential environmental effect	Monitoring commitment	Means of implementation
Cumulative reduction in access to, or exclusion from established fishing grounds	Contribution to the development of a strategic, regionally coordinated approach to commercial fisheries monitoring to support understanding of cumulative effects.	Engagement with the East Region Commercial Fisheries Working Group and relevant stakeholders to inform the scope, data sources, and governance of monitoring; secured in the Section 36 Consent and Marine Licences, via the requirement for an FMMCP, where appropriate and proportionate.
Cumulative displacement leading to gear conflict and increased fishing pressure on adjacent grounds		

13.14 Transboundary Effects

13.14.1 A screening of transboundary effects has been carried out (see Volume 3, Technical Appendix 4.5: Transboundary Impacts - Screening) and any potential for significant transboundary effects with regard to commercial fisheries from the Proposed Development upon the interests of European Economic Area (EEA) states has been assessed as part of the EIA.

13.14.2 The screening identified that there was the potential for transboundary effects to occur in relation to commercial fisheries. The potential transboundary impact is summarised below:

- effects on Commercial Fishing fleets from all EEA countries as a result of constraints on foreign Commercial Fishing activities operating in and around the Proposed Development, namely non-UK pelagic trawlers. These effects may include reduction in access to fishing grounds and potential displacement of fishing effort from the Proposed Development to alternative fishing grounds in EEA States.

13.14.3 Effects on foreign Commercial Fishing fleets from EEA States, in terms of reduction in access to fishing grounds and displacement into alternative grounds including other EEAs, have already been intrinsically considered throughout the commercial fisheries EIA process and assessment outcomes are

presented in the impact assessment (Section 13.10) and CEA (Section 13.12) where effects on the pelagic trawl fishery are described.

13.15 Summary of Impacts, Mitigation, Likely Significant Environmental Effects and Monitoring

13.15.1 Information on commercial fisheries within the Local and Regional Commercial Fisheries Study Areas was collected through desktop review and stakeholder engagement. This information is summarised in Section 13.5.

13.15.2 Table 13.17 presents a summary of the assessment of significance in respect to commercial fisheries.

13.15.3 The impacts assessed include:

- reduction in access to, or exclusion from established fishing grounds within the Array Area;
- reduction in access to, or exclusion from established fishing grounds within the Export Cable Corridor;
- displacement leading to gear conflict and increased fishing pressure on adjacent grounds;
- disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity;
- increased vessel traffic associated with the Proposed Development within fishing grounds leading to interference with fishing activity;
- additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Proposed Development; and
- increased snagging risk, which could result in loss or damage to fishing gear.

13.15.4 Overall, it is concluded that there will be no likely significant environmental effects arising from the Proposed Development during the construction, O&M or decommissioning phases.

13.15.5 Table 13.18 presents a CEA on Commercial Fisheries in EIA terms.

13.15.6 The cumulative effects assessed include:

- reduction in access to, or exclusion from established fishing grounds;
- displacement leading to gear conflict and increased fishing pressure on adjacent grounds; and
- disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity.

13.15.7 Cumulative impacts of reduced access to fishing grounds and associated displacement (the first two bullets above), arising from the Proposed Development together with other relevant OWF projects within the Commercial Fisheries CEA Study Area, were assessed and predicted to result in Minor adverse effects (not significant in EIA terms) for most fishing fleets. An

exception to this is UK demersal otter trawl/seine and scallop dredge fisheries, for which Moderate adverse cumulative effects were identified.

- 13.15.8 These Moderate cumulative effects reflect the combined spatial footprint of OWF developments within the Commercial Fisheries CEA Study Area, which increases the extent of temporary access restriction and the potential for redistribution of fishing effort. The contribution of the Proposed Development to these cumulative effects is limited, reflecting the relatively low levels of fishing activity within the Proposed Development footprint and the assumption that fishing activity may resume within the site during the O&M phase.
- 13.15.9 The FMMCP represents Embedded Mitigation for the Proposed Development. While the Proposed Development alone is not predicted to result in significant effects on commercial fisheries in EIA terms, regional scale monitoring of fisheries activity is proposed in recognition of the cumulative development context within the Commercial Fisheries CEA Study Area. This regional scale monitoring will be delivered through the FMMCP (Volume 4, Appendix 28: Fisheries Mitigation, Monitoring and Communication Plan) and will be proportionate to the nature and scale of impacts identified for the Proposed Development. The Applicant recognises that effective monitoring in a cumulative offshore wind context is best delivered through a coordinated regional approach and will therefore engage with other developers and relevant stakeholders, where appropriate, to support strategic monitoring initiatives. Monitoring outputs may inform future updates to the FMMCP through ongoing liaison and adaptive management. With implementation of these measures, the residual cumulative effect of reduced access and associated displacement is assessed as Minor adverse and not significant in EIA terms.
- 13.15.10 No significant cumulative effects are concluded in relation to disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity.
- 13.15.11 No likely significant transboundary effects have been identified in regard to effects of the Proposed Development.

Table 13.17: Summary of Assessment of Significance

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
Construction Phase								
Impact 1: Reduction in Access to, or Exclusion from Established Fishing Grounds Within the Array Area	1, 4, 7, 10, 11, 12, 14, 16, 17, 24, 49, 55	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible adverse	
		Handline fishery	Negligible	Medium	Negligible adverse		Negligible adverse	
Impact 2: Reduction in Access to, or Exclusion from Established Fishing Grounds Within the Export Cable Corridor	1, 4, 7, 10, 11, 12, 14, 16, 17, 24, 49, 55	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Negligible	Medium	Negligible adverse		Negligible adverse	
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible adverse	
		Handline fishery	Low	Medium	Minor adverse		Minor adverse	
Impact 3: Displacement		Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
Leading to Gear Conflict and Increased Fishing Pressure on Adjacent Grounds	1, 4, 7, 10, 11, 12, 14, 16, 17, 24, 49, 55	Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible adverse	
		Handline fishery	Low	Medium	Minor adverse		Minor adverse	
Impact 4: Disturbance of Commercially Important Fish and Shellfish Resources Leading to Displacement or Disruption of Fishing Activity	As described for Volume 2, Chapter 9: Fish and Shellfish Ecology.	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Impact 5: Increased Vessel Traffic Associated with the Proposed Development Within Fishing	9, 10, 11, 12, 14, 16, 18, 22, 42, 49	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
Grounds Leading to Interference with Fishing Activity		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Impact 6: Additional Steaming to Alternative Fishing Grounds for vessels That Would Otherwise Fish Within the Proposed Development	9, 10, 11, 12, 14, 16, 24, 49	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Impact 7: Increased Snagging Risk, Which Could Result in Loss or Damage to Fishing Gear	1, 4, 5, 8, 10, 11, 12, 13, 14, 16, 17, 20, 22, 41, 48, 49, 50	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
O&M Phase								
Impact 1: Reduction in Access to, or Exclusion from Established Fishing Grounds Within the Array Area	1, 4, 10, 11, 12, 14, 16, 17, 23, 24, 49, 55	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible adverse	
		Handline fishery	Negligible	Medium	Negligible adverse		Negligible adverse	
Impact 2: Reduction in Access to, or Exclusion from Established Fishing Grounds Within the Export Cable Corridor	1, 4, 10, 11, 12, 14, 16, 17, 23, 24, 49, 55	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Negligible	Medium	Negligible adverse		Negligible adverse	
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible adverse	
		Handline fishery	Negligible	Medium	Negligible adverse		Negligible adverse	

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
Impact 3: Displacement Leading to Gear Conflict and Increased Fishing Pressure on Adjacent Grounds	1, 4, 10, 11, 12, 14, 16, 17, 23, 24, 49, 55	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible adverse	
		Handline fishery	Negligible	Medium	Negligible adverse		Negligible adverse	
Impact 4: Disturbance of Commercially Important Fish and Shellfish Resources Leading to Displacement or Disruption of Fishing Activity	As described for Volume 2, Chapter 9: Fish and Shellfish Ecology.	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Impact 5: Increased Vessel	9, 10, 11, 12, 14, 16, 18, 22, 23, 42, 49	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
Traffic Associated with the Proposed Development Within Fishing Grounds Leading to Interference with Fishing Activity		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Impact 6: Additional Steaming to Alternative Fishing Grounds for vessels That Would Otherwise Fish Within the Proposed Development	9, 10, 11, 12, 14, 16, 23, 24, 49	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Impact 7: Increased Snagging Risk, Which Could Result in Loss or Damage to Fishing Gear	1, 4, 5, 8, 10, 11, 12, 13, 14, 16, 17, 20, 22, 23, 41, 48, 49, 50	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Decommissioning Phase								
Impact 1: Reduction in Access to, or Exclusion from Established Fishing Grounds Within the Array Area	1, 4, 7, 10, 11, 12, 14, 16, 17, 24, 49, 55, 34	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible adverse	
		Handline fishery	Negligible	Medium	Negligible adverse		Negligible adverse	
Impact 2: Reduction in Access to, or Exclusion from Established Fishing Grounds Within the Export Cable Corridor	1, 4, 7, 10, 11, 12, 14, 16, 17, 24, 49, 55, 34	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Negligible	Medium	Negligible adverse		Negligible adverse	

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible	
		Handline fishery	Low	Medium	Minor adverse		Minor adverse	
Impact 3: Displacement Leading to Gear Conflict and Increased Fishing Pressure on Adjacent Grounds	1, 4, 7, 10, 11, 12, 14, 16, 17, 24, 49, 55, 34	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Negligible	Low	Negligible adverse		Negligible adverse	
		Handline fishery	Low	Medium	Minor adverse		Minor adverse	
Impact 4: Disturbance of Commercially Important Fish and Shellfish Resources Leading to Displacement or Disruption of Fishing Activity	As described for Volume 2, Chapter 9: Fish and Shellfish Ecology.	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
Impact 5: Increased Vessel Traffic Associated with the Proposed Development Within Fishing Grounds Leading to Interference with Fishing Activity	9, 10, 11, 12, 14, 16, 18, 22, 42, 49, 34	Potting fishery	Low	Medium	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Impact 6: Additional Steaming to Alternative Fishing Grounds for vessels That Would Otherwise Fish Within the Proposed Development	9, 10, 11, 12, 14, 16, 24, 49, 34	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal otter trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Low	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	
Impact 7: Increased Snagging Risk, Which Could	1, 4, 5, 8, 10, 11, 12, 13, 14, 16, 17, 20, 22, 41, 48, 49, 50, 34	Potting fishery	Low	Low	Minor adverse	None proposed	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor adverse		Minor adverse	

Description of Impact	Embedded Mitigation ID	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance of Residual Effect	Proposed Monitoring
Result in Loss or Damage to Fishing Gear		Demersal otter trawl fishery	Low	Medium	Minor adverse		Minor adverse	
		Demersal seine fishery	Low	Medium	Minor adverse		Minor adverse	
		Pelagic trawl fishery	Low	Low	Minor adverse		Minor adverse	
		Handline fishery	Low	Low	Minor adverse		Minor adverse	

Table 13.18: Summary of CEA

Description of Impact	CEA Tier	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance Residual Effect	Proposed Monitoring
All Phases								
Reduction in access to, or exclusion from established fishing grounds	Tier 2, Tier 3 and Tier 4	Potting fishery	Low	Medium	Minor	N/A	Minor adverse	Monitoring proposed, as set out in Section 13.13
		Scallop dredge fishery	Medium	Medium	Moderate	Monitoring proposed, as set out in Section 13.13	Minor adverse	
		Demersal otter trawl fishery	Medium	Medium	Moderate	Monitoring proposed, as set out in Section 13.13	Minor adverse	
		Demersal seine fishery	Medium	Medium	Moderate	Monitoring proposed, as set out in Section 13.13	Minor adverse	
		Pelagic trawl fishery	Low	Medium	Minor	N/A	Minor adverse	
		Handline fishery	Low	Medium	Minor	N/A	Minor adverse	
		Potting fishery	Low	Medium	Minor	N/A	Minor adverse	

Description of Impact	CEA Tier	Receptor	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Mitigation	Significance Residual Effect	Proposed Monitoring
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	Tier 2, Tier 3 and Tier 4	Scallop dredge fishery	Medium	Medium	Moderate	Monitoring proposed, as set out in Section 13.13	Minor adverse	Monitoring proposed, as set out in Section 13.13
		Demersal otter trawl fishery	Medium	Medium	Moderate	Monitoring proposed, as set out in Section 13.13	Minor adverse	
		Demersal seine fishery	Medium	Medium	Moderate	Monitoring proposed, as set out in Section 13.13	Minor adverse	
		Pelagic trawl fishery	Low	Medium	Minor	N/A	Minor adverse	
		Handline fishery	Low	Medium	Minor	N/A	Minor adverse	
Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity	Tier 2, Tier 3 and Tier 4	Potting fishery	Low	Medium	Minor	N/A	Minor adverse	None proposed
		Scallop dredge fishery	Low	Medium	Minor	N/A	Minor adverse	
		Demersal otter trawl fishery	Low	Medium	Minor	N/A	Minor adverse	
		Demersal seine fishery	Low	Medium	Minor	N/A	Minor adverse	
		Pelagic trawl fishery	Low	Medium	Minor	N/A	Minor adverse	
		Handline fishery	Low	Medium	Minor	N/A	Minor adverse	

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